

THE WORLD'S FAVOURITE AIRCRAFT MODELLING MAGAZINE

Scale AVIATION Modeller *International*

IPMS USA 2006
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SCALE PLASTIC KITS

I-16 type 24

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A. BORIS F. SAFONOV, 72. SAP, NORTHERN FLEET, Summer 1941. B. GENADJI TSOKOLAJEV, 4.GIAP, BALTIC FLEET, LAKE LADOGA, APRIL 1942. C. LI. KRICHEVSKIY 254. IAP, Leningrad front, 1942. D. LEV L. SHESTAKOV, 69. IAP, ODESSA, SUMMER 1941.



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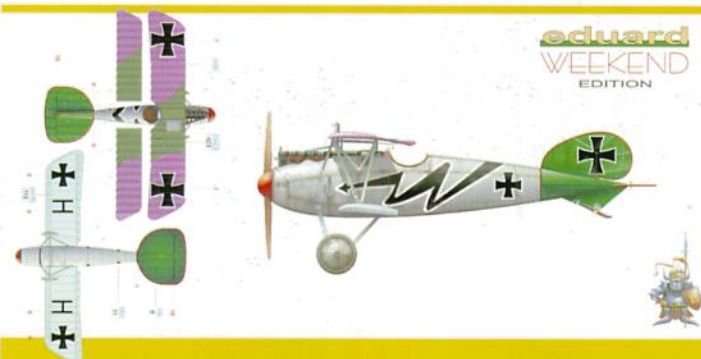
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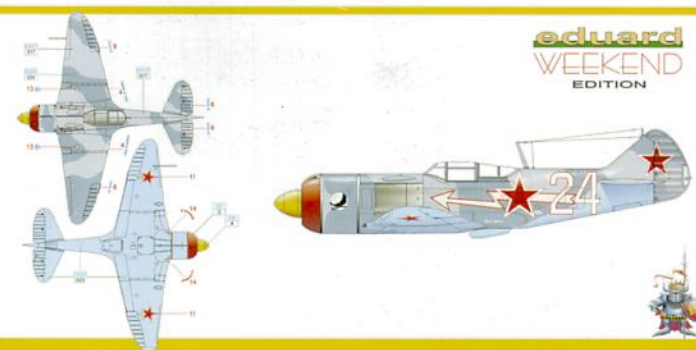
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Albatros D.V

Albatros D.V 4629/17, flown by Hans von Hippel, Jagdstaffel 5, February 1918



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PLASTIC KIT

La-7

La-7 pilot, Maj. Amet Khan Sultan

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Scale
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International



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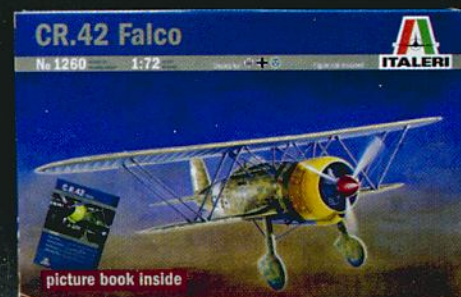
886 by Paul Janicki
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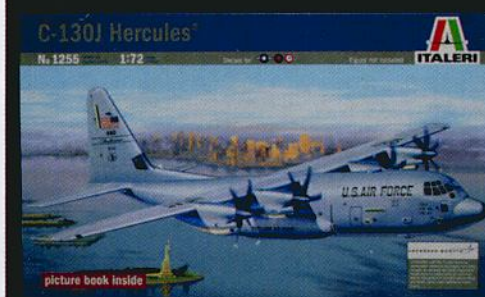
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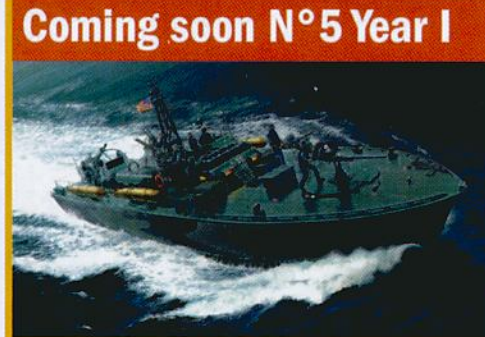
1255 C-130J Hercules 1:72



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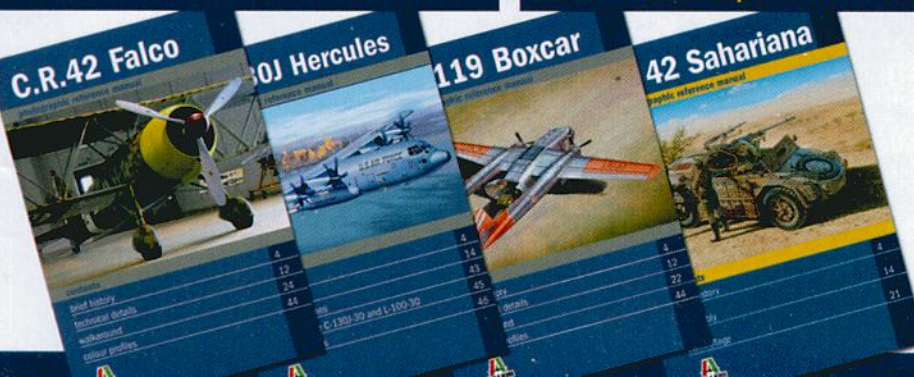
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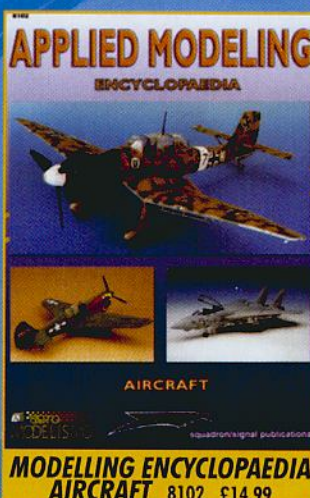
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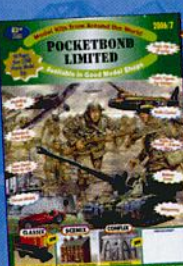
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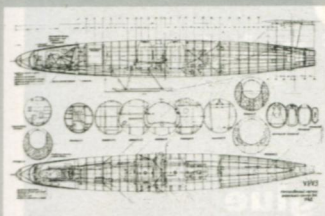
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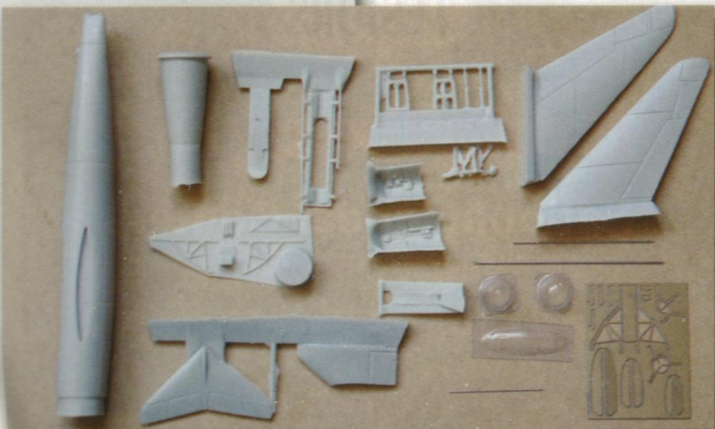


Scale: 1/48	Kit No: KIT001
Panel Lines: Recessed	Price: 58 Euro
Status: New Tooling	Decal Options: 0
Type: Resin	
Parts: Resin 20, Clear 3, Brass 3, Metal 3	
Manufacturer: 48 Special Models	



- The Osprey Encyclopedia Of Russian Aircraft, by Bill Gunston. Osprey Publishing Ltd. ISBN 1-84176-096-X

Kit components, with main items in "hard and brittle resin"



Project DFS

48 Special Models DFS 346 'Beuteflugzeug' built by Tony Gloster

The DFS project to build a Mach 2.6 reconnaissance platform which started life in 1943 and can be considered as potentially the world's most advanced aircraft by the end of the war. In 1945 the three prototypes then under construction at the Siebel works at Halle in Saxony fell into the hands of the Soviets and were taken to Russia, where work continued on the design at OKB-2.

A number of changes were made. A 45° sweepback wing with fences replaced the 35° wing and the fuselage was increased in length. The first

prototype was initially flown in 1948 under tow from a Junkers Ju 388, and first air-launched, unpowered, from a captured B-29 Superfortress. The DFS 346-2 or 346D made the first flight on the 30 September 1949, piloted by former Messerschmitt test pilot Wolfgang Ziese, and again air-launched from the B-29, but on landing the aircraft was damaged, injuring the pilot. It was not until the 15 August 1951 that Ziese took to the air once again in 346-3, on the third flight (and first under power) on 14 September 1951 Ziese lost control of the 346-3 because of control surface flutter and had to abandon the aircraft. At this point the whole programme was stopped, curtailing development of the projected 446 and 468.

The Kit

A stout box with a line drawing of the aircraft on the lid hosts a number of resealable plastic bags containing 20 light parts in grey resin which is hard and brittle, a thick photo-etched steel sheet of 13 parts, three vacform items which make up the canopy, and three lengths of steel tubing in 0.5 mm, 1 mm and 1.2 mm gauges.

The resin castings are in the style of ARBA kits (no bad thing), but without the refinement. All parts needed cleaning

up, and some of the castings are crude to say the least.

The instructions are in an A4 format, printed on eight pages and they are comprehensive and friendly, being mostly text but with a few well drawn images. I do recommend you read and re-read them, as the English can be a bit odd and misleading in places, I took a week to make sure I knew what was what and this paid off when making the kit.

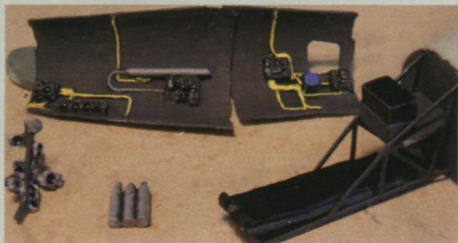
Construction

The build starts with the cockpit. Here you are given a choice of a metal or resin cockpit frame. I recommend the metal one as it's so much stronger than the resin. The instructions point out that folding the metal frame is not easy, even after annealing, because of the thickness of the steel used. I overcame this by heating the frame red hot over a gas cooker and then bending it to shape with pliers, finishing off the job with a small hammer.

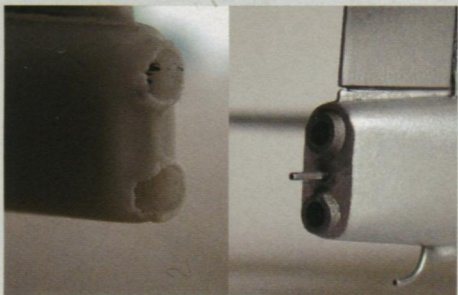
Once that was done the framework was dry-fitted to the back of the cockpit, and the bits that fit onto were tried out. The only adjustment needed was to the pilot's 'bench', which needed trimming to fit into the framing. The cockpit's sidewall detail is supplied as two



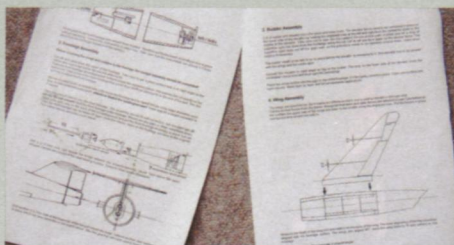
"Some of the castings are crude." Somewhere in here is the instrument panel!



Cockpit interior is "passable" out of the box, and could benefit from detailing, but once assembled, you can't see very much



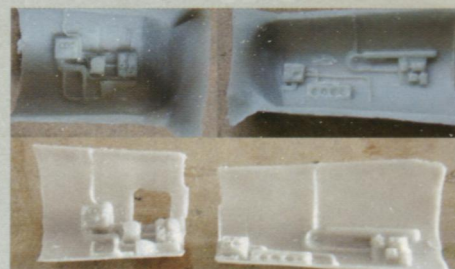
The two exhaust outlets were damaged and had to be replaced with plastic tube



Instructions are comprehensive and friendly, but "can be a bit odd and misleading in places"



"I recommend you invest in a tube of good filler — you're going to need it!"



Cockpit sidewall detail comes on two castings that need careful preparation



Forward fuselage joint needed work with filler and wet 'n dry to get a flush fit



Retractable skid landing gear is made up from 13 parts, four of them etched steel

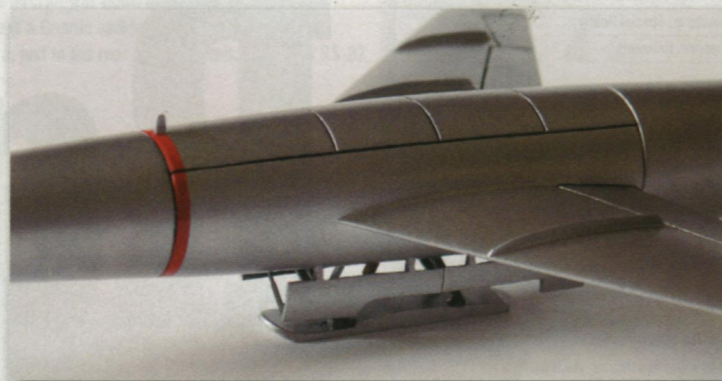
castings that need gentle and careful rubbing down. The instructions recommend you remove all the backing resin, leaving just the instruments and wiring, I was not convinced about this, and thus left a thin backing (that did not impair seat fitting).

The instrument panel took a lot of work to get it looking anything like reasonable, but with a bit of paint it came out OK. The rest of the cockpit is passable. You could add a lot of extra detail if you so wished, but once assembled you can't see very much so I refrained from such decadence!

Tail and wings came next. They were dry-fitted, with the mounting points needing a clean up to ensure a good firm fit. I recommend investing in a tube of good filler, as you'll going to need it to fill the gapes once glued. The wing

fences require the cut-outs which mark their position on the wing to be deepened. On my kit the two exhaust outlets were damaged and had to be replaced with plastic tube.

Now onto the front fuselage section, which required some work with filler and wet 'n dry to get a flush fit before the canopy could be fitted. This is made up of a number of parts. The inner pressurized dome which holds the instrument panel was glued to the fuselage using Microscale Krystal Klear. The pilot's 'tube' has to be built up from two pieces metal tubing and two parts from the steel fret which make up the framing. Even after annealing they proved impossible to bend without breaking, so the parts were scratchbuilt using stretched sprue and fixed to the inner canopy. The aerodynamic outer



canopy is meant to be a push-fit to the inner canopy, I but again I used Krystal Klear just to be safe.

The last thing to be built was the undercarriage, which comprises 13 parts, four of them steel. The castings here were not too bad, and once painted made up into a clean replica which fitted without problems. The completed model is tail-heavy. I added a small piece of stout wire just behind the skid to overcome this.

Colour Options

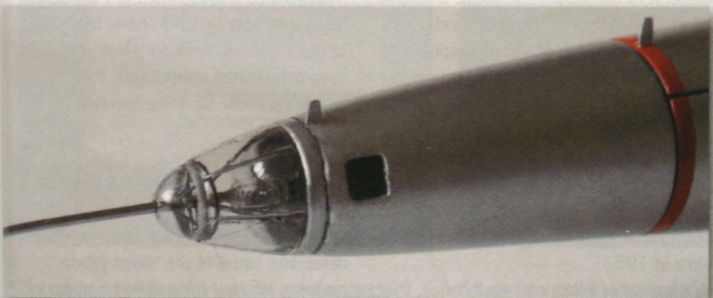
The one thing that is certain about the DFS 346 is that the powered version and the subject of this kit was in an overall clean and polished natural metal

finish. This was achieved with Humbrol silver which was sprayed on. Apart from a red band around the cockpit/fuselage junction there are no other markings.

Conclusion

Despite its crudity I enjoyed this build, which called upon some different skills in its making. You could really work up the cockpit as well as adding more detail to the undercarriage. However it's not for the beginner — by a long way — though anyone with some resin kits under their belts could make this up into very impressive looking aircraft. I can just see it mounted on the Monogram/Revell B-29. Now that *would* look different!

SAMT



BUILD 1/48

BY DAVID FRANCIS



Polikarpov I-16

Type 10

Scale: 1/48 Kit No: 8148
Panel Lines: Recessed Price: £15.50
Status: Revised Tooling Decal Options: 4
Type: Injection Moulded Plastic
Parts: Plastic 84, Clear 2, Brass 43
Manufacturer: Eduard UK Importer: LSA

BUILD 1/32

BY STÉPHAN MARIGNAC



Polikarpov I-16

Type 10/17 'Great Patriotic War'

Scale: 1/32 Kit No: 32001
Status: New Tooling Decal Options: 3
Panel Lines: Recessed Price: £TBA
Type: Limited Run Injection Moulded Plastic
Parts: Plastic 56, Resin 14, Clear 2, Etched 4
Manufacturer: Special Hobby
UK Importer: Hannants

Colour References

Many of the colour profiles are based on research made by Erik Pilawskii, for which his assistance is gratefully acknowledged.

- 'Modelling The VVS' website - Matt Bittner and Erik Pilawskii: <http://vvs.hobbyvista.com>

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- 'Black Cross/Red Star - Volume 2' - Christer Bergstrom & Andrey Mikhailov, Pacifica/Classic Publications, 2001
- 'Polikarpov Fighters In Action - Part 2' - Hans-Heiri Stapfer, Squadron/Signal Publications, 1996
- 'Rumanian Air Force - The Prime Decade 1938-1947' - Denes Bernad, Squadron/Signal Publications, 1999
- 'Soviet Air Force Fighter Colours 1941-1945' - Erik Pilawskii, Classic Publications 2003



Rata!

David Francis builds the new Eduard 1/48 scale Polikarpov I-16 Type 10, while Stéphane Marignac tackles Special Hobby's 1/32 scale kit

Turning Japanese

In May 1939 a Mongolian pilot defected to Arutoku in Western Manchuria in his Polikarpov I-16 Type 10. The Japanese Army returned this aircraft to Japan where it was test flown by Commandant Yamamoto of the Technical Institute of Aviation at Tachikawa airfield.

This is not one of my occasional fanciful digressions into 'What Ifs?' that occasionally appear in these pages, but a true story and the inspiration for my

model of a unique aircraft.

The Polikarpov I-16 to modern eyes looks very old-fashioned, but at the time of its introduction it was a ground-breaking design. The first high-speed monoplane fighter to enter squadron service with the Soviet Union during 1935, the I-16 had a surprisingly long career which stretched from its celebrated use during the Spanish Civil War and the early days of WWII until it finally retired from service with Spain's *Ejército del Aire* in 1953.

Despite its historical significance, the

I-16 has not been served well by the mainstream model industry, with only Hobbycraft's flawed series of Polikarpovs being available in 1/48 scale. Step forward Eduard, who, in a few years, have established a reputation for producing some stunning models.

The Kit

On opening the box you are presented with a number of well-packaged olive green sprues that display finely engraved detail and some of the nicest fabric covering effects I have seen on a model.



As is usual in Eduard kits now, you also get a fret of their pre-painted etched brass for items such as the instrument panel and seat belts. A small Eduard mask set is supplied to help with painting the transparencies and wheels.

In this first boxing the small decal sheet provides for a number of Russian aircraft, but a Spanish Civil War Type 10 will be released in due course. Finally, the package is completed with instructions in Eduard's new house style that is being clear and easy to follow, with colour notes keyed to the Gunze Mr Color range.

One thing to note is that there are a number of plastic parts that will not be used on this version. These include an alternative cowl and propeller, two spinners and a set of wing-mounted cannon.

Construction

I started by detailing the fuselage interior with a number of levers, which are offered in injected-moulded plastic, etched brass or a mix of both. I decided to use the plastic parts as they looked better than the brass, providing a more three-dimensional appearance to the levers and knobs.

At this stage Eduard also suggest that you attach the exhaust pipes. These are hollowed out and look good after painting in a reddish brown shade, but I decided that installing them now would

complicate the final painting, so left them off until later in construction. At this stage you can choose if you want to display the small cockpit door open, I did not but in hindsight if you want the cockpit detail to be visible I would

position it open.

After painting the interior in light grey with dark green details I used some black-and-white-coloured wire to reproduce the electrical cabling using photographs

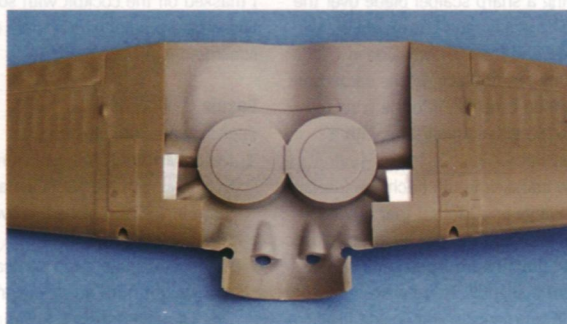
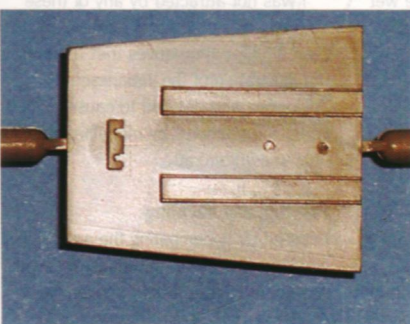
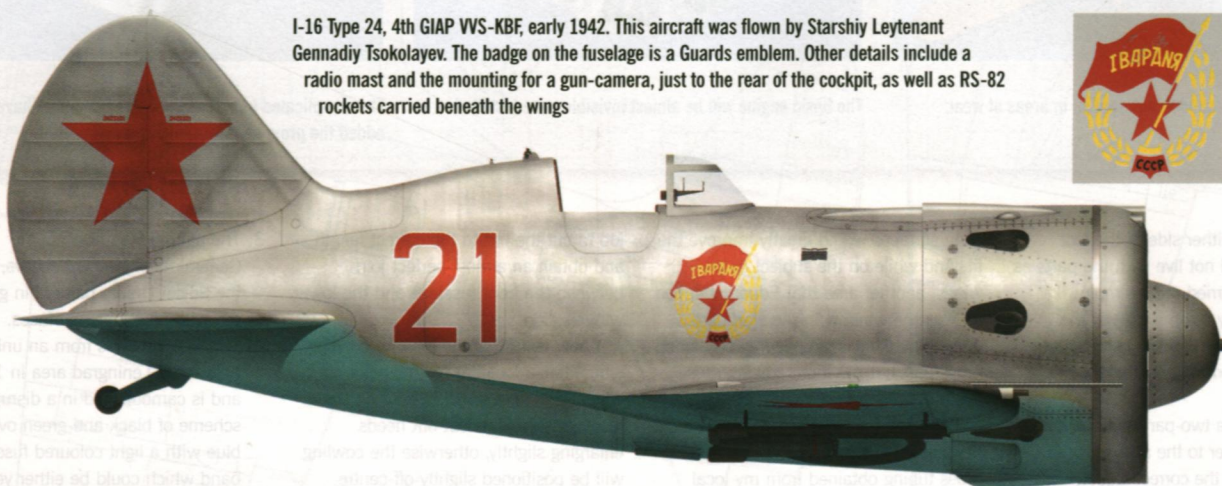
Googled from the web as a guide. At this point you can join the fuselage halves, as the rest of the cockpit assembly can be inserted through the large opening on the lower fuselage.

Eduard supply a choice of two instrument panels. The first is a plastic moulding to which you add detail using a decal. This is fine for the novice, but more experienced modellers will use the pre-painted brass version which you attach to a plastic baseplate. The detail on the brass is superb and easy to assemble so long as you use slow-setting superglue or gloss varnish to join the parts. Once assembled the completed instrument panel can be glued into the fuselage, but unfortunately is virtually invisible once the halves are joined.

Now we turn to the cockpit floor and seat. Unfortunately Eduard have gone for ease of assembly rather than accuracy, as the cockpit floor is moulded solid whereas on the real aircraft there was a



I-16 Type 24, 4th GIAP VVS-KBF, early 1942. This aircraft was flown by Starshiy Leytenant Gennadiy Tsokolayev. The badge on the fuselage is a Guards emblem. Other details include a radio mast and the mounting for a gun-camera, just to the rear of the cockpit, as well as RS-82 rockets carried beneath the wings



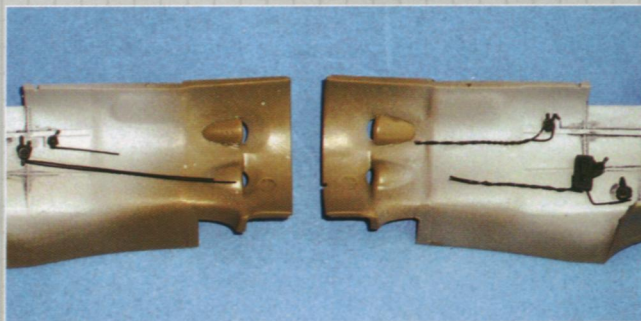
The solid cockpit floor fits well but is not accurate

Plastic tabs added to the underside of the top wing halves

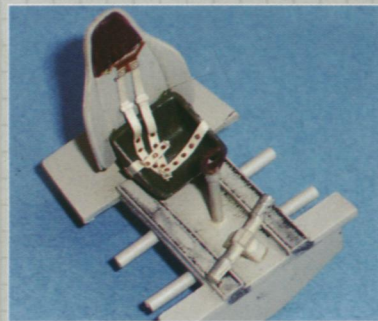
Pre-painted etched brass instrument panel



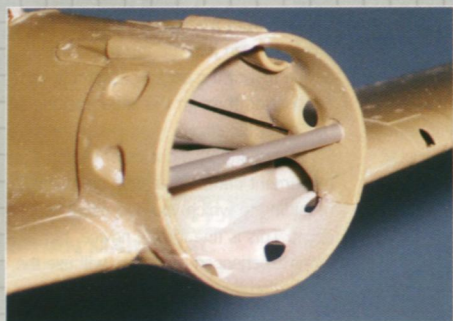
Modified cockpit floor



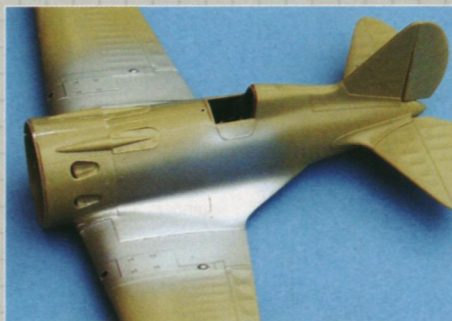
Added wire to the side wall boxes and throttle



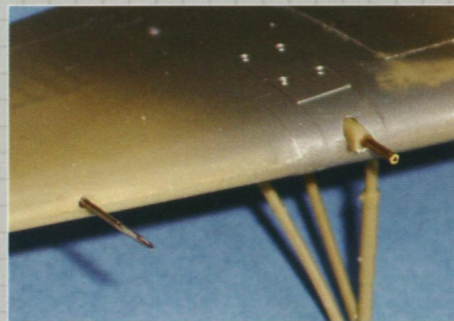
Completed floor, my first wash was too thick and had to be removed and reapplied



Plastic rod was used to spread the fuselage slightly



The fit of parts was very good with only small amounts of filler needed



Replacement Pitot tubes and gun barrel



Alclad Aluminium undercoat applied in areas of wear.



The basic engine will be almost invisible once installed



The complicated undercarriage arrangement. I have not yet added the prominent retraction wire

large void on either side of the foot boards. I could not live with the parts as moulded so carried out a simple modification by trimming away the excess plastic and adding some plastic tubing to reproduce the steel tube structure.

The seat is a two-part unit and as long as you refer to the assembly diagram to get the correct angles it is easy to put together. I painted my seat light grey, but I have seen photographs of the seat painted in green or left in natural metal. Once the seat is painted you can add the pre-finished seatbelts, I am constantly amazed that modellers still use tape and foil for seatbelts and harnesses as there is no way you can reproduce the detail supplied on Eduard's belts unless you are a master modeller.

After attaching the completed floor and seat to the fuselage I turned my attention to the wings. These assemble flawlessly, but a test fitting to the fuselage revealed that adding a plasticard lip to the underside of the top

wing surfaces would greatly improve the fit. And while on the subject of the wings, another area that Eduard skipped on was the window in the starboard wheel bay. This is supplied as an etched brass part but the more adventurous could open it out.

I decided to replace the plastic machine gun barrels with some thin brass tubing obtained from my local model railway shop. This is easy to cut by rolling a sharp scalpel blade over the tube. The plastic gun barrels were removed and the new brass ones superglued in to place, at the same time I also glued a needle into the wing to replace the plastic pitot tube with a stronger item.

Now came time to attach the fuselage to the wings and I found that it was advisable to add a small length of plastic rod into the forward fuselage to spread the front it slightly. There were two injector pin marks on the inside fuselage halves that are located in exactly the right spot for this, and it was a simple

job to cut the rod to the correct length and obtain an almost perfect join between the front fuselage and the lower wing section.

I now test fitted the forward cowl, which has a locating pip moulded on it which fits into a small cut-out on the fuselage side. This cut-out needs enlarging slightly, otherwise the cowl will be positioned slightly off-centre.

With all the major assembly complete I masked off the cockpit with some wet tissue before painting the main colour scheme.

Decals

Four schemes are offered:

1. Major Mikhail N Yakushin's machine that flew with the Red Five aerobatic team in 1939, finished in overall grey with a black cowl and stripe down the fuselage and a red vertical tail.
2. An aircraft from an unknown unit in the Ukraine during 1941, finished in overall grey with a roughly brushed coat of green.

3. The aircraft was flown by Generalmajor Ivan A Lakeevs, Hero of the Soviet Union, painted in green on top with blue lower surfaces.

4. This last option is from an unknown unit in the Leningrad area in 1944 and is camouflaged in a disruptive scheme of black and green over light blue with a light coloured fuselage band which could be either yellow or white.

I was not attracted by any of these schemes and it was while I was searching for alternatives that I found the illustration of the Japanese Polikarpov and decided to cause a little confusion at shows by modelling this little known aircraft.

Painting and decaling

I started by undercoating the areas which would receive wear on the fuselage with Alclad aluminium. I then applied two coats of Humbrol light grey thinned 50/50 with white spirit. The photograph of the Japanese Polikarpov showed

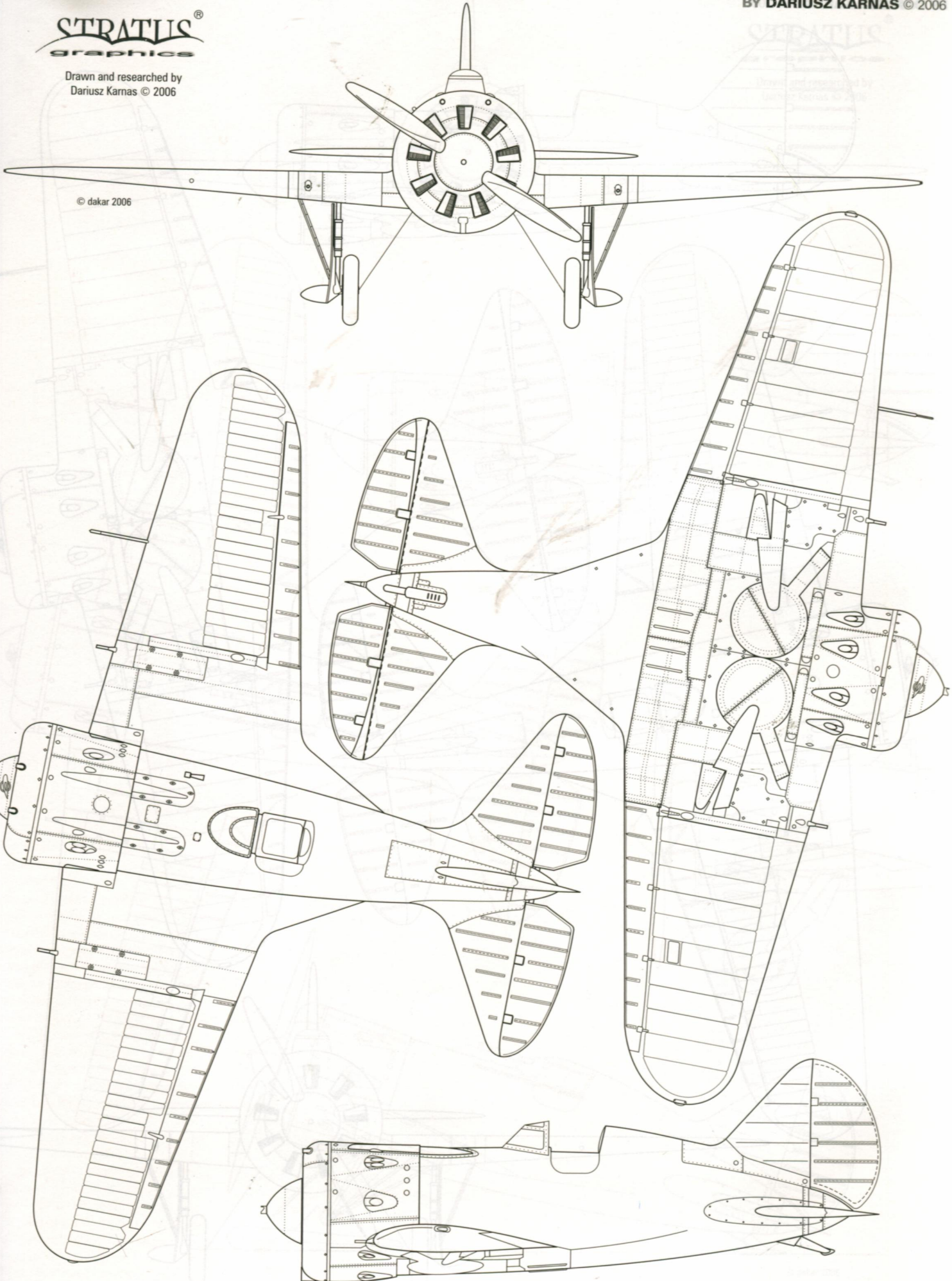
Polikarpov I-16 Type 10

SCALE PLANS 1/48
BY DARIUSZ KARNAS © 2006

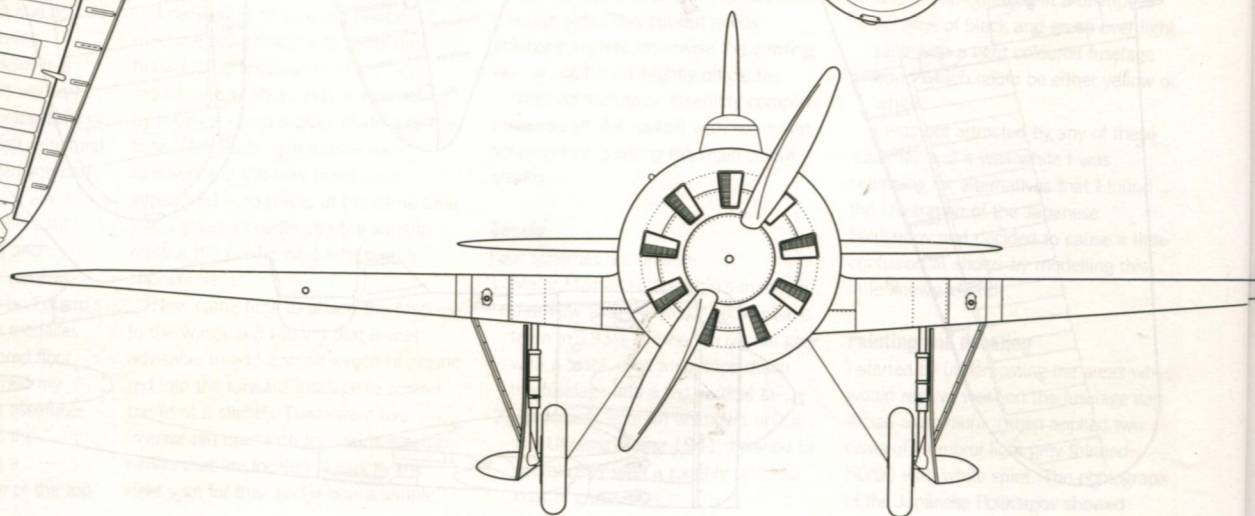
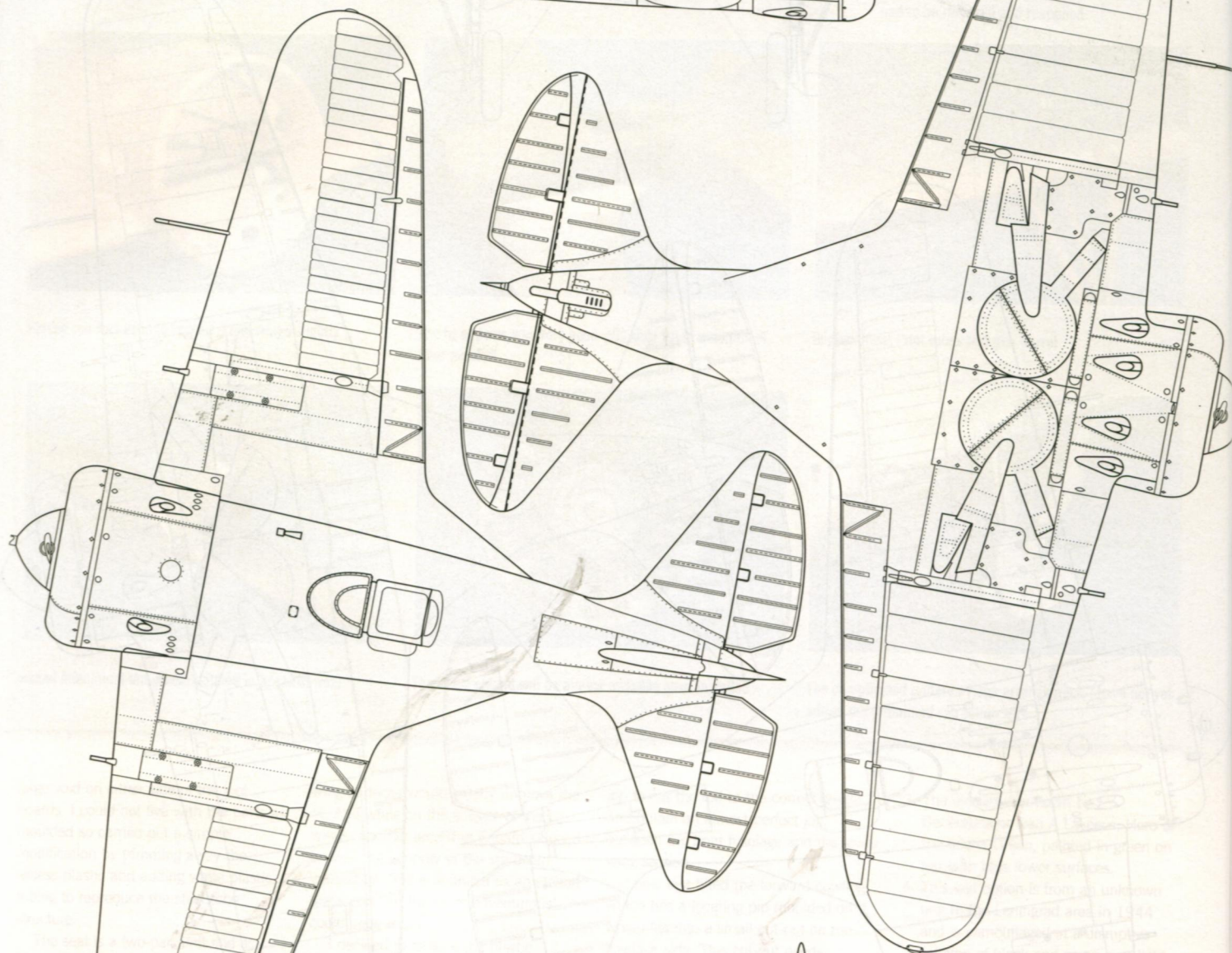
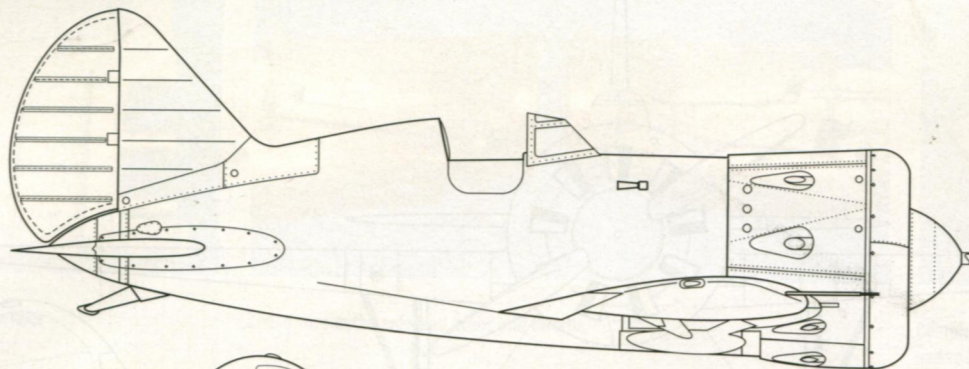
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graphics

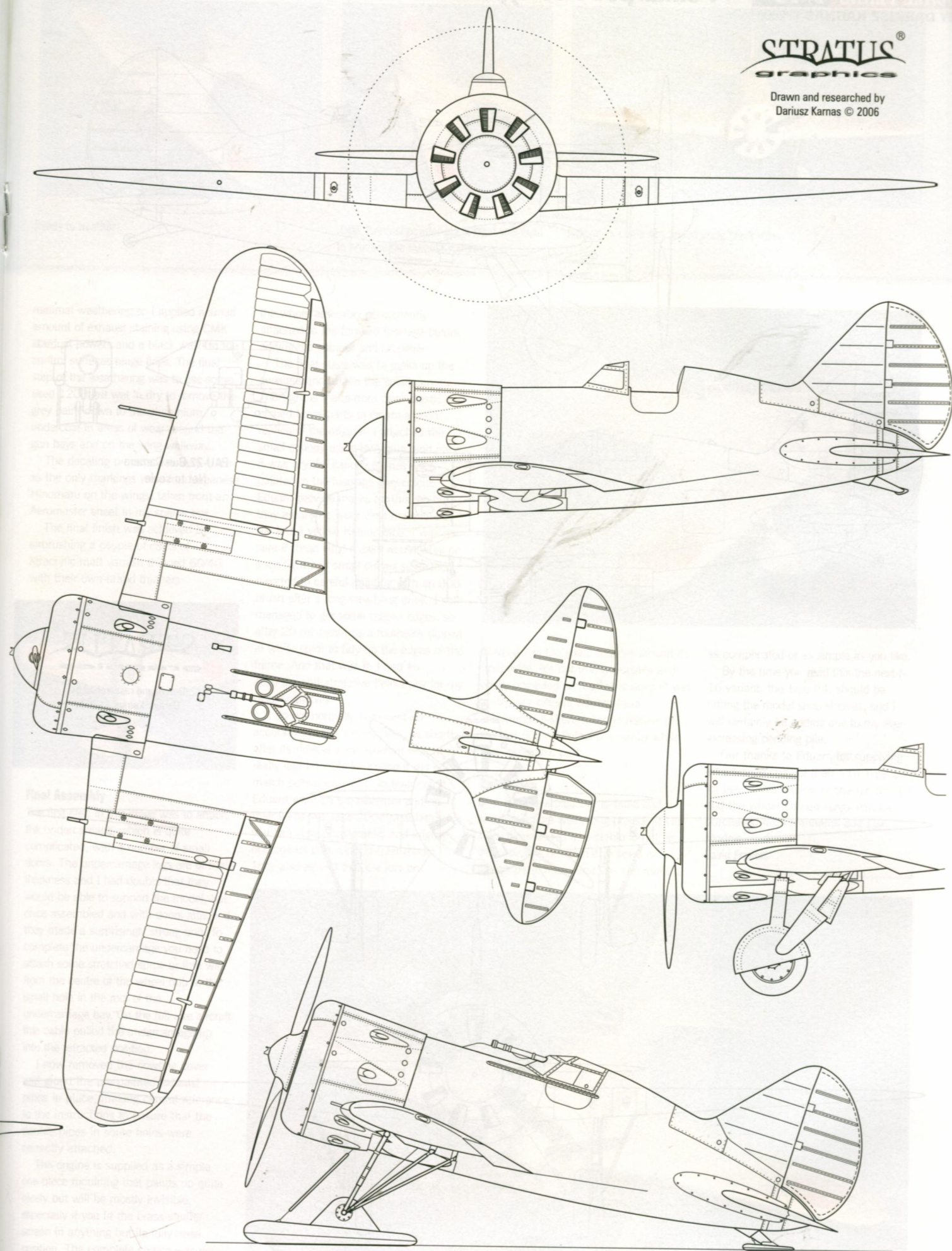
Drawn and researched by
Dariusz Karnas © 2006

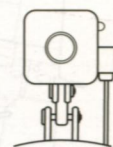
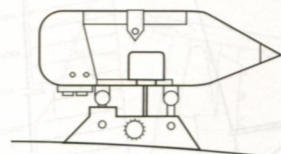
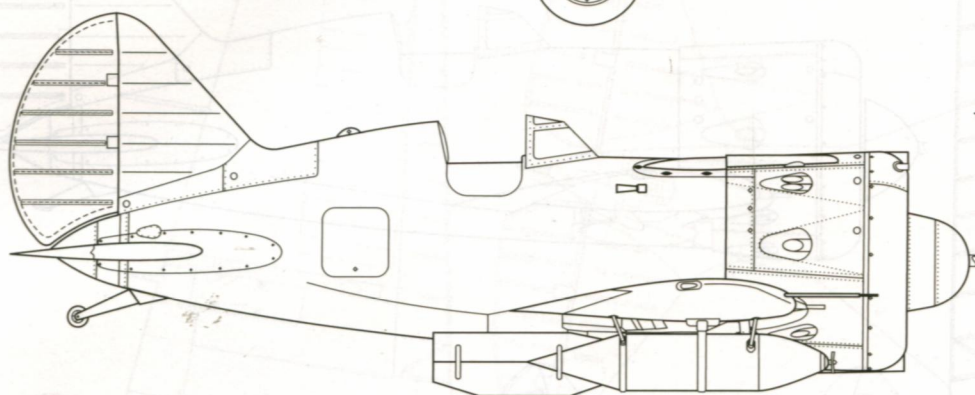
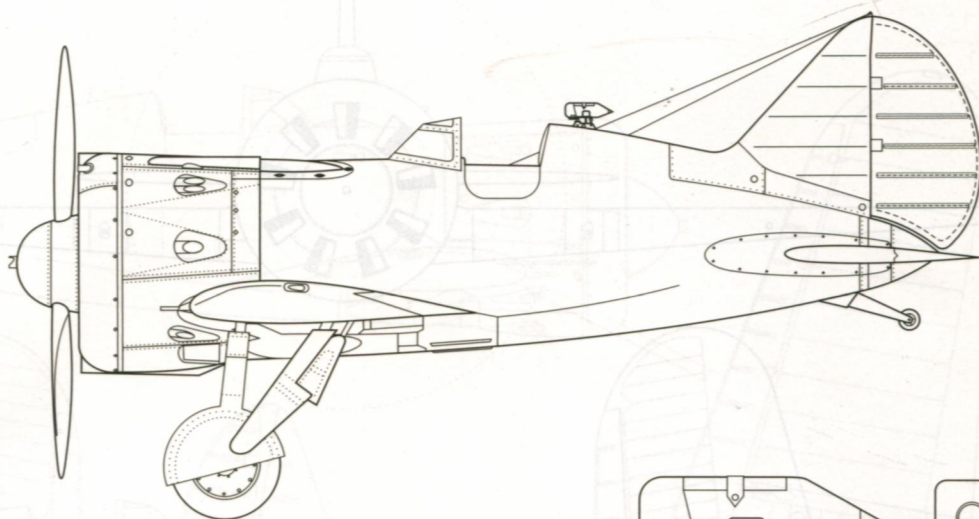
© dakar 2006



Polikarpov I-16 Type 5



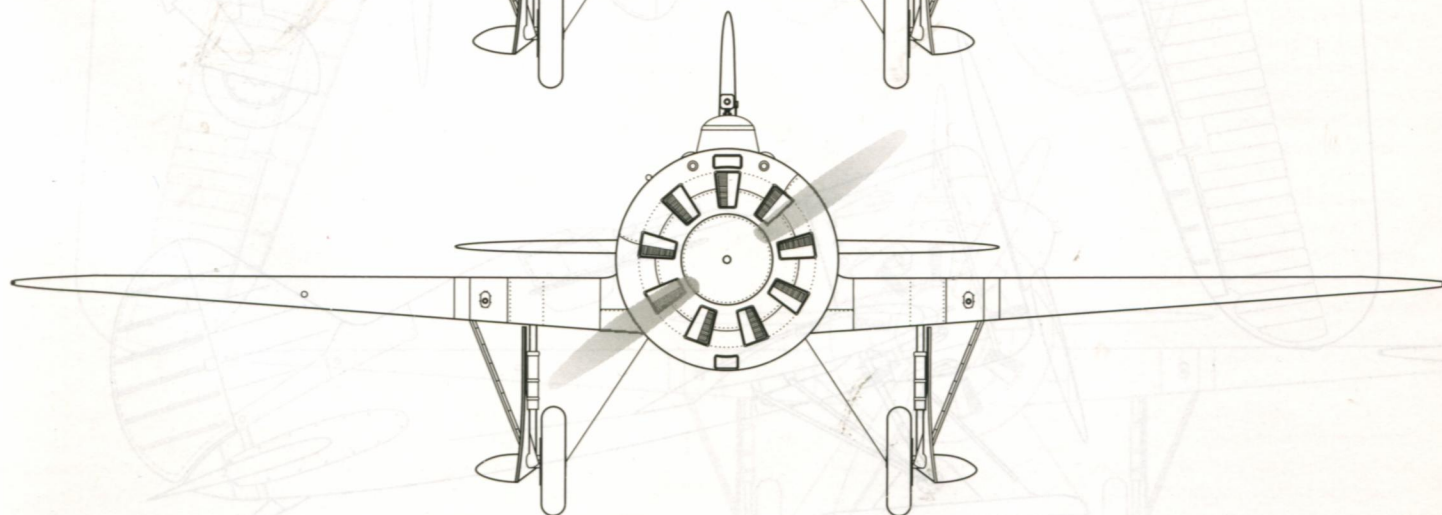
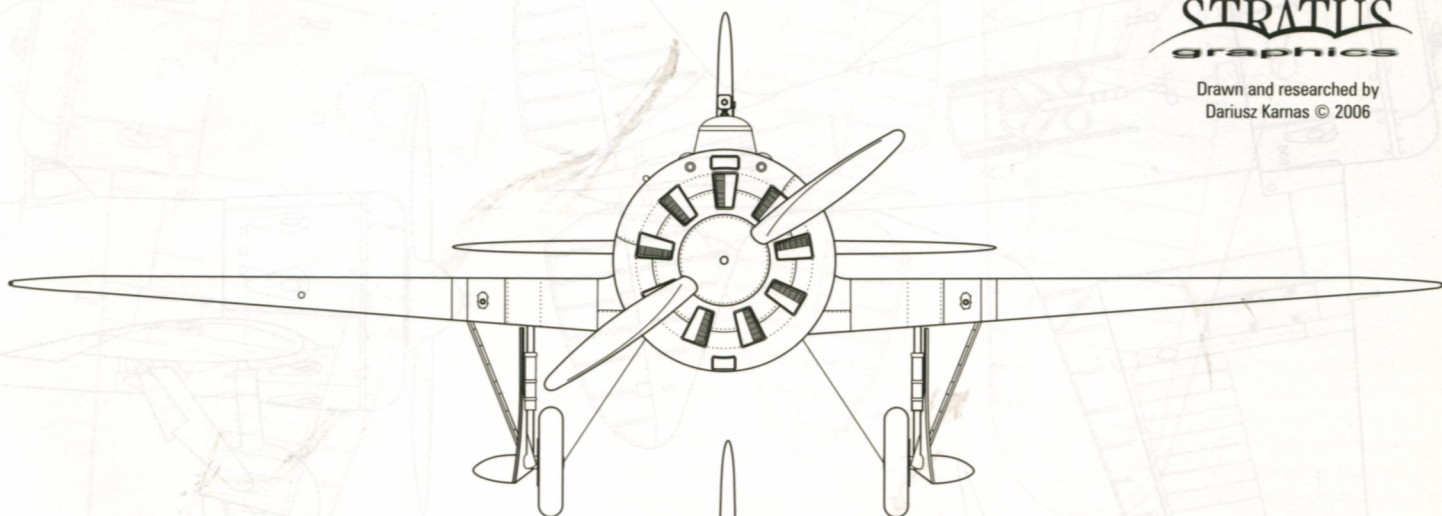




PAU-22 Gun Camera
Not to scale

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Ready to weather



CMK Stardust powder black smut was used to produce the exhaust staining



Retraction cable was added using black wire.

minimal weathering so I applied a small amount of exhaust staining using CMK stardust powders and a black wash to the control surfaces hinge lines. The final step of the weathering was to use some used 1200-grit wet 'n dry to remove the grey paint down to the aluminium undercoat in areas of wear around the gun bays and on the wing walkway.

The decaling process was very quick as the only markings were four Japanese Hinomaru on the wings, taken from an Aeromaster sheet in my spares box.

The final finish was achieved by airbrushing a couple of coats of Xtracrylic matt varnish thinned 60/40 with their own-brand thinners.

the whole assembly permanently attached to the forward fuselage before adding the spinner and propeller.

The final stage was to make up the gunsight and attach the small canopy. The sight is made from clear plastic and etched brass parts to create a good replica of the original. I attached the small canopy using PVA glue, and once it was dry the canopy frames were painted in the fuselage grey colour. Eduard provide masks for this job but they are in the older vinyl material not the latest yellow Kabuki tape. I was not sure if these vinyl masks would work on such tight and small curves so instead resorted to careful painting with an 000 brush after a long steady drink. I still managed to get some ragged edges, so after 20 minutes I us a toothpick dipped in white spirit to tidy up the edges of the frame. And that was it. I had an accurate and attractive Polikarpov for my display shelves.

I do not normally comment on accuracy but feel I must here, as shortly after its release some Internet reviewers really laid into this kit saying it did not match published plans. To their credit Eduard went on the offensive and on their website's June 2006 newsletter you can view photographs and original documents that support their model. They also agreed that the forward



cowling has too sharp a curve around its front edge. It's not that noticeable and easily corrected with a few swipes of wet 'n dry, but diligent Eduard have announced a short delay on release of the rest of their Polikarpov family while they retool this part.

Conclusion

This kit was a pleasure to build and made a simple week-long project. It can be recommended as suitable for all, as the provision of alternative brass or plastic parts mean that you can make it

as complicated or as simple as you like.

By the time you read this the next I-16 variant, the Type 24, should be hitting the model shop shelves, and I will certainly be adding one to my ever-increasing pending pile.

Our thanks to Eduard for supplying an advance copy of their I-16 Type 10 for use in this review. In the UK this kit and the whole Eduard range can be purchased from Hannants and LSA Models.

David Francis

SAMI

Final Assembly

The first step in this stage was to attach the undercarriage, which is quite complicated, with a number of small doors. The undercarriage legs are of scale thickness and I had doubts that they would be able to support the model, but once assembled and with doors attached they made a surprisingly strong unit. To complete the undercarriage you need to attach some stretched sprue or thin wire from the centre of the wheel hub to the small hole in the roof of the undercarriage bay. On the full-size aircraft this cable pulled the undercarriage up into the retracted position.

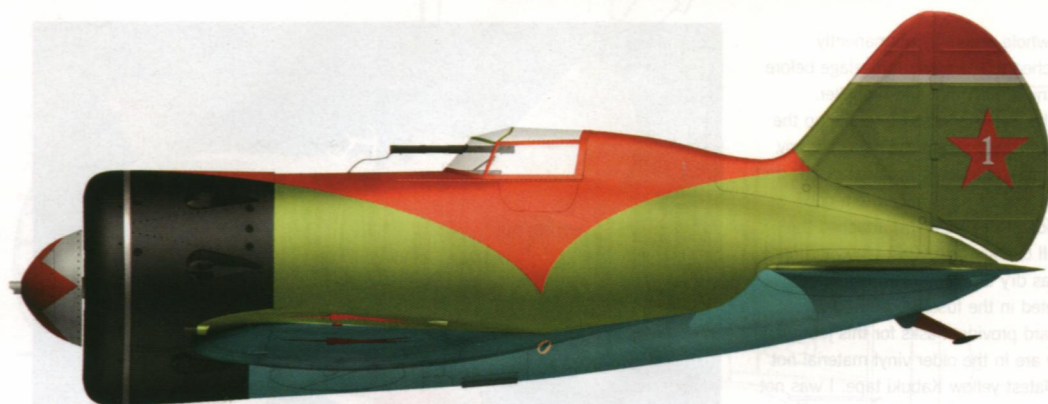
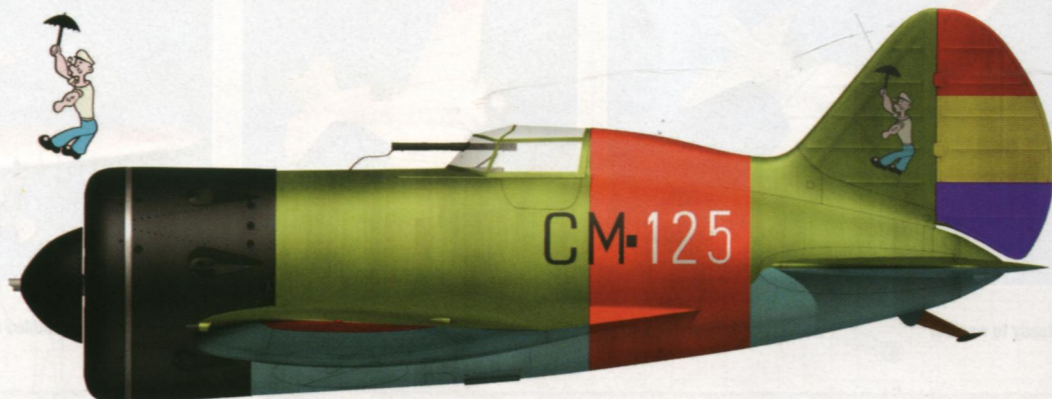
I now removed the cowling cover and glued the pre-painted exhaust pipes in place, making careful reference to the instructions to ensure that the double pipes in some holes were correctly attached.

The engine is supplied as a simple one-piece moulding that paints up quite nicely but will be mostly invisible, especially if you fit the brass shutter screen in anything but its fully open position. The complete engine was now cemented to the forward cowling and



Polikarpov I-16

I-16 Type 5, 4a Escuadrilla de Moscas, operated by the Republican Air Force during the Spanish Civil War, c.1938



I-16 Type 5, 33 IAP. This aircraft was flown by the regimental commander, Major P. Petrov, c. September 1940



I-16 Type 5. This particular aircraft, flown by P. Stefanovskiy, was one of three that took part in an aerobatic display during the May Day parade of 1937

I-16 Type 5, 13 OIAE, Finland, early 1940. This aircraft is fitted with non-retractable ski gear and bears the inscription 'Za Kommunizm!' ('For Communism!')

I-16 Type 10, 728 IAP, 1942



I-16 Type 10, 7 IAP, flown by A. Brazovets, c. Winter 1939



I-16 Type 10. This aircraft is one of the 'Krasnaya Pyaterka' ('The Red Five') aerobatic team during 1939-40

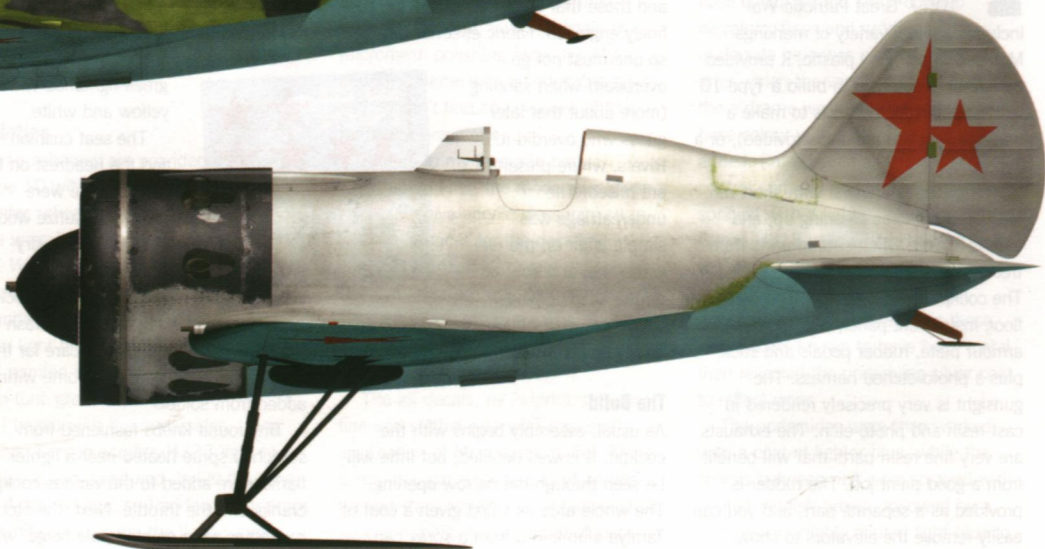


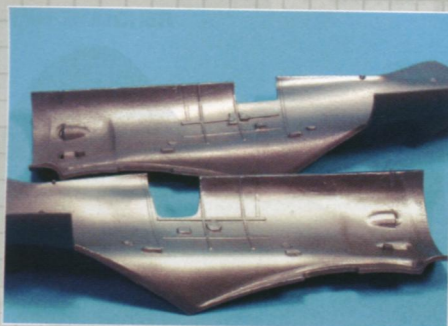
I-16 Type 10, 4th GIAP VVS-KBF, early 1942



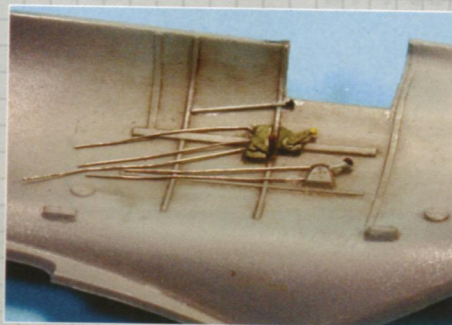
I-16 Type 17, 4th GIAP VVS-KBF, Spring 1942. This aircraft was flown by Hero of the Soviet Union Mikhail Vasil'ev

I-16 Type 10, unit unknown. This aircraft wears patches over areas of damage to the fuselage, as well as a replacement rudder

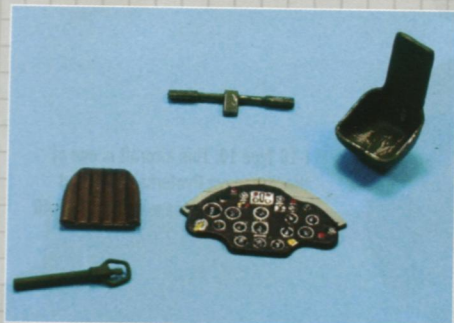
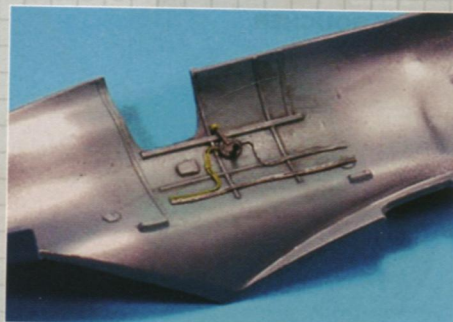




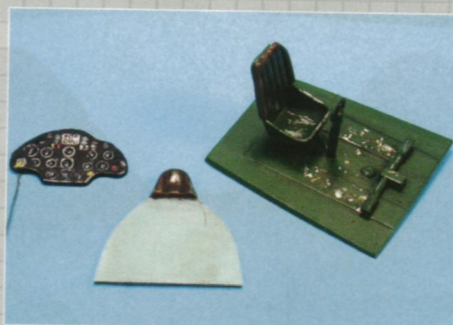
Fuselage halves out the box. An initial coat of Tamiya AS12 silver has been applied



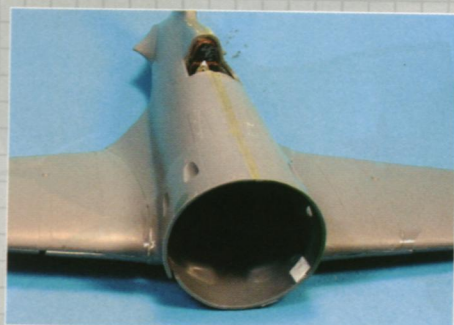
Cockpit sidewalls painted RLM 65, with details added from stretched sprue and solder



Cockpit components painted ready for installation. The instrument faces have been dry-brushed silver, and drops of gloss varnish applied to simulate glass



Underwing gaps filled with plasticard, cyano and "liberal applications of Tamiya light curing putty"



Plasticard stiffeners applied to the forward fuselage area to improve its fit with the cowl ring



Wing seams have been filled with plasticard, putty applied and sanded, ribs restored using Evergreen strip, sanded to shape and raised rivets destroyed by sanding replaced and made good with thin slices of plastic rod



Two-tone Rata

Following the Azur release of the I-16 Type 10, this Special Hobby kit of the I-16 Type 10/17 'Great Patriotic War' includes a wider variety of markings. Moulded in soft grey plastic, it provided parts that enable you to build a Type 10 with skis (but all the parts to make a wheeled Type 10 are also provided), or a Type 17.

The parts, as is usual with short-run kits, do need some cleaning up, and care is needed when cutting parts from trees, as the injection gates are thick. The cockpit is very well detailed, with floor, instrument panel, seat, cushion, armour plate, rudder pedals and stick, plus a photo-etched harness. The gunsight is very precisely rendered in cast resin and photo-etch. The exhausts are very fine resin parts that will benefit from a good paint job. The rudder is provided as a separate part, and you can easily remove the elevators to show

them drooped, as was common to this type when on the ground, as a separate set is provided.

Being built mostly out of wood, there were very few panel lines on the I-16, and those that were present are very finely engraved. Fabric effect is very soft, so one must not go overboard when sanding (more about that later — guess who overdid it?). Rivets, where present, are raised. The undercarriage was simple affair on the real aeroplane, and so it is on the kit. The wheel covers are quite thick, even in this scale, and will benefit from sanding.

The Build

As usual, assembly begins with the cockpit. It is well detailed, but little will be seen through the narrow opening. The whole area was first given a coat of Tamiya aluminium from a spray can,

followed by RLM 65 *Hellblau* for the sidewalls, seatback armour plate and instrument panel coaming. A dry-brush with light grey was then applied, highlighting the raised cockpit frames. Floor and seat, control column and rudder pedals were painted with a crude mix of Gunze dark green lightened with yellow and white.

The seat cushion and the headrest on the armour plate were painted in Gunze wood brown and then dry-brushed with Dark Earth. The whole cockpit

was then given a highly diluted wash of sepia oil paint, with special care for the cushion and headrest, and some wiring added from solder.

Tiny round knobs fashioned from stretched sprue heated near a lighter flame were added to the various cockpit cranks and the throttle. Next, the etched harnesses were painted pale beige, with

silver buckles and added to the seat.

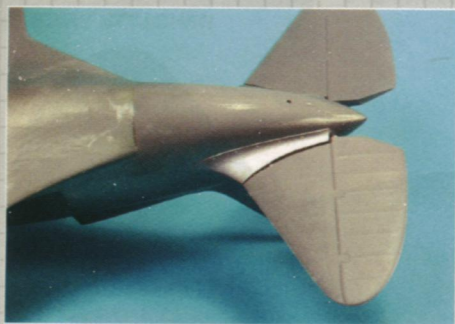
Fill, sand, polish, fill, sand...

A close check of the fuselage halves' joints and several dry-fits confirmed my initial fears: another putty filler inferno was ahead of me... So, the fuselage halves were then joined and the cockpit assembly inserted from below.

And so to the fitting of the wings. If all had gone all right, if not smoothly up till now, the *real* work began here. The differences between the Type 10 and 17 were mostly due to a change of engine — signified by more exhaust stacks — and a different underwing centre-section. And here came the first very 'dark spots'. I elected to glue the upper wing parts to fuselage then add the lower wings' outer sections, followed by the centre-section.

But, the front cowlring was of wider diameter than the matching part of the center underwing section, hence a great gap at engine front, and there were also 3 mm gaps at the underwing centre-





Poor fit at fuselage/tailplane juncture is evident here



Decalling under way



Kit's landing gear struts were replaced with Evergreen rod. Careful study is the instructions is advised when fitting the gear doors



Pitot tube, 20 mm ShVAK cannon and exhaust stubs are well illustrated here

section and outer wing joints. I filled these with plasticard, cyano and liberal applications of Tamiya light curing putty, then sanded to shape. A direct consequence is a bad step at the wing outer section's seams and slight anhedral, whereas the I-16 had neither anhedral nor dihedral.

The fuselage/wing joint was also a challenge and had to be sanded to match the fuselage shape. Here again, the use of the light curing putty was essential, as it doesn't contract on drying, and having built this model on a sunny day, it was the matter of a half-an-hour between beginning operations and achieving a final smooth joint.

Next came assembly of the engine front face to the fuselage. Here there was also a gap, but at least it was level, with no 'step'. I loaded the gap reloaded with stretched sprue and plasticard, followed by more puttying.

The windscreen was added after installing the very finely detailed gunsight, then masked with Tamiya

tape, a small gap filled using Gunze Mr Surfacer, then sanded with 1200-grit wet 'n dry paper. I always install windscreens before painting, as they usually need trimming and filling. A last coat of Tamiya aluminium to reveal any remaining glitches, a final polishing with Micromesh and it was into the paint shop.

Painting

Three schemes are provided in the kit: a Type 10 with skis, overpainted in white winter scheme with the white colour on the wing being unevenly painted; Type 17 *White 28*, as flying now in New Zealand (see accompanying photos) in standard camouflage of dark green/black over light blue; and my choice, a Type 17 painted in a field-applied scheme of two-tone green over light blue.

I began with the undersides, using Gunze Sangyo acrylics H323 light blue which is very vivid and darker than the final desired hue, so I added a few drops of white. Next came the lighter green,

Gunze H303/FS 34102 for the entire uppersurfaces. The paint was allowed to dry for three hours and then sanded using Micromesh to achieve a smooth and glossy surface. The second Green, Gunze H303/FS 34092 was then sprayed freehand, followed again by Micromesh polishing once dry. My chosen scheme was an educated guess, as I couldn't find any pictures of that particular aeroplane.

And so to my favourite part, weathering. First, the model was given a coat of Tamiya acrylic gloss varnish to prepare surfaces for the decalling. Following a 48-hour drying period (Tamiya gloss colours, even acrylics, do need that time to dry rock hard), I polished again with Micromesh polishing in preparation for decalling.

The kit decals, by Aviprint, are very fine and settled well with my usual application of Micro Set and Sol. There is minimal carrier film, except around the red stars, where I would advocate a good trimming. Another coat of gloss

varnish to seal decals, a further 48 hours' drying, and yet more Micromesh polishing ensured that paint and decals were protected by before weathering, which began with spraying the lightened base colour on the fabric-covered elevators, flaps and rudder. The underside blue was similarly treated, after which the very few panel lines on the airframe were oversprayed in the base colour with a few drops of black added. Raised such as the ribs on the control surfaces and gun covers were sprayed with a lighter colour, in this case Gunze H313 yellow highly diluted so that it was more like tinted water, and applied in light 'veils'. A very light polishing with Micromesh over those raised parts known to have been metal then revealed the underlying silver coat to reflect wear.

The undersides were then worked with a coat of lighter blue, while the spaces between ribs were sprayed with diluted reddish-brown, followed by a final 'veil' of highly diluted light blue to

Rata-11: I-16 Type 17, unit unknown, Leningrad area, Summer 1941



Rata-13: I-16 Type 24, 7 IAP, Leningrad Front, 1941

Rata-14: I-16 Type 24, 13 IAP VVS-KBF, possibly flown by Podpolkovnik Romanenko (the unit commander), Autumn 1941. This aircraft wears patches of All Dark Green over its standard scheme of All Green over All Blue, as well as what could be AEh-9 Grey towards the rear part of the fuselage and rudder. The All Dark Green areas appear to have been marked out in with more definition around their edges, but filled in with a less thicker coat



Rata-15: I-16 Type 24, unit unknown

Rata-18: I-16 Type 28, operated by either 161 or 163 IAP in the Minsk area, Summer 1941

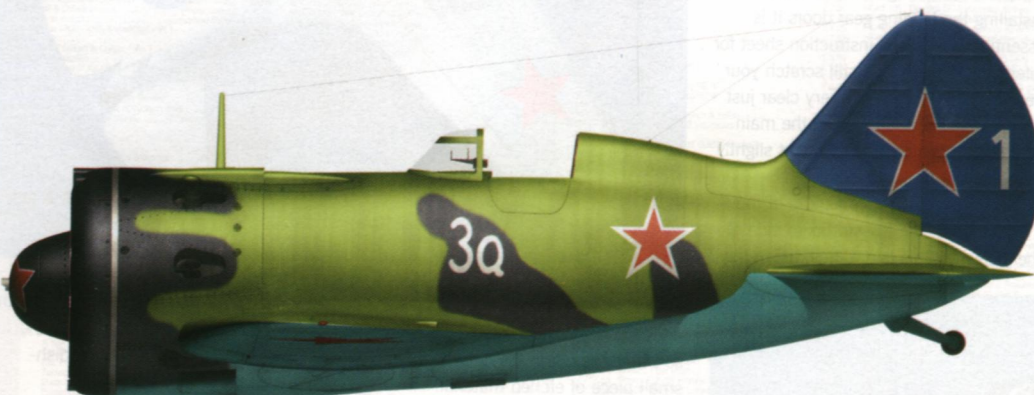




Rata-16&17: I-16 Type 24, 72 SAP VVS-SF. This aircraft was flown by Hero of the Soviet Union Boris Safonov. The inscription on the left side of the fuselage proclaims 'Za Stalina!' ('For Stalin!'), whilst the inscription on the aircraft's right side says 'Smert' Fashistam!' ('Death to Fascists!')

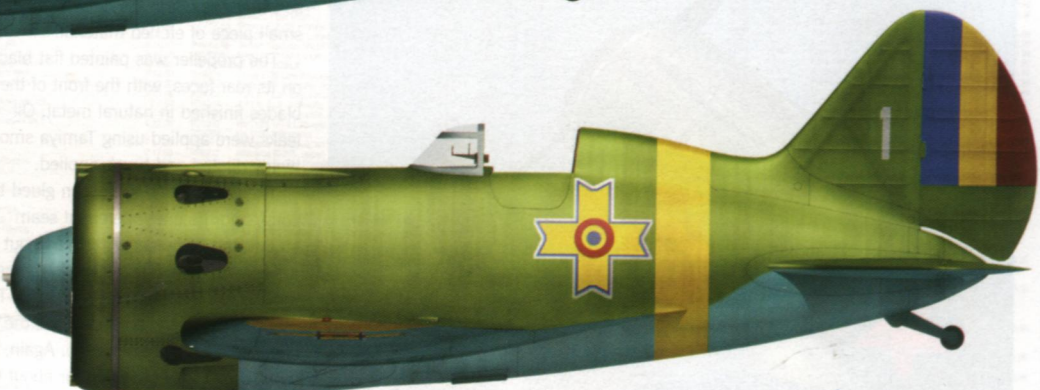
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Rata-19: I-16 Type 29, flown by V.P. Segalaev, 71 IAP VVS-KBF, 1942. This aircraft is armed with RS-132 rockets



Rata-20: I-16 Type 29, flown by Serzhants Slesarchuk, Gazin, Perevera, ? IAP, 7 IAK-PVO, Autumn 1941. The word 'Za' ('For') is an incomplete fuselage inscription

Rata-21: I-16 Type 29. This aircraft was the first Soviet fighter to be captured by Romanian forces, in July of 1941. It was used by the Rumanian Air Force for mock combat against Rumanian and German fighters until it was written off during a hard landing in September 1941





blend in the whole area. A wash of sepia brown artist's oil paint thinned with white spirit was then liberally applied to the panel lines, and after 10-15 minutes' drying time it was wiped with kitchen tissue in the general direction of the airflow. After an overall coat of flat varnish is then applied, as some of the further weathering operations would be dulled or erased by the flat coat. I've been recently testing the Xtracrylics, water based flat varnish and do warmly recommend it; water diluted to a 70/30 ratio, it make very thin coats and the degree of "flatness" can be easily controlled. Highly diluted with Tamiya acrylic thinner, or alcohol, it makes for really nice "dusty" effects...

Being a mostly wooden aeroplane the I-16 had very few panel lines, so weathering requires playing with shades and hues to reproduce scuff marks from mechanics' shoes, oil leaks and so on. I gave the undersides a dry-brush of dark

brown to represent thrown-up mud from unpaved, and applied brushed 'leaks' with H95 Smoke grey. A highly diluted overspray of H313 Yellow went on to the wing and tailplane roots to represent dust, while brush strokes of gloss varnish were used for grease and oil leaks. Watercolour pencil in various shades of grey, brown and green were used to replicate wood abrasion.

Finally satisfied with my weathering it was time to install the undercarriage. The kit's landing gear struts were replaced with Evergreen rod. When installing the landing gear doors it is essential to have the instruction sheet for reference — and you'll still scratch your head a little — as it isn't very clear just what goes where. The top of the main gear strut cover needs to be bent slightly to make it fit properly.

One of the distinctive feature of the I-16 is a venturi on the starboard side of the fuselage. This is not provided in the



kit and was carved from sprue. The kit's pitot tube has been also oversimplified, so I made one from Evergreen rod and a small piece of etched material.

The propeller was painted flat black on its rear faces, with the front of the blades finished in natural metal. Oil leaks were applied using Tamiya smoke, highly diluted and brush-applied.

The ShVak guns were then glued to wing, and the circumferential seam around the engine cowling made out of a thin strip of self-adhesive aluminium tape, burnished into place with a Q-Tip.

The final operation was to set the resin exhaust stacks in place. Again, the instructions are not very clear about their position and some trimming was

needed. The exhausts were painted with Testors metalizer black metal and worked over with shades of reddish-brown to beige to reflect heat discoloration.

Conclusion

On the whole a most desirable model, and apart from the wings-to-fuselage assembly there is nothing tricky in the build if you have previous experience with multi-media, short-run kits. I would recommend it to anyone wanting to take their first steps in 1/32 scale.

Stéphane Marignac



The carcass of an I-16 Type 24 being picked over for souvenirs (© Scott Pick Collection)



This shot-up and stripped wreck is a Type 5, complete with original style forward-sliding canopy (© Scott Pick Collection)



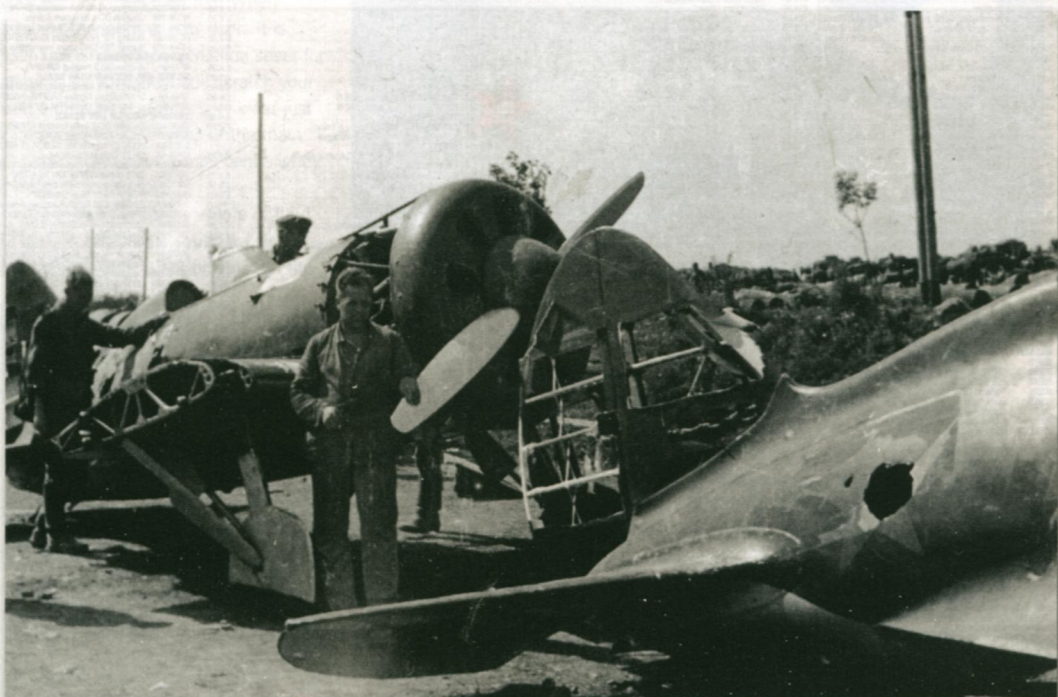
A UTI-4 trainer amongst other wrecks. The I-16 to the left looks like a Type 5 (© Scott Pick Collection)

References

- Istrebitel' I-16, Armada #2, Moscow 1997. A Russian-language book from M-Hobby, with an excellent selection of photos, drawings, plans and colour profiles. Fortunately the photos have English captions.
- Polikarpov I-16 – the History of a Revolutionary Aircraft, by P Laureau et al. Translated from the French book, and much the best history and description available in English. Good photos, plans, and some rather suspect colour profiles. Excellent details of the I-16's operations in Spain and China. It also mentions French interest in the I-16, which conjures up some lovely "What If?" schemes

Other Sources

- Polikarpov Fighters In Action Vol.2, Squadron/Signal #162. Nice photos, shame about the captions and colour schemes. The history here is very much at odds with other sources, and is unconvincing; and please don't use the plans as a reference for modelling!
- Encyclopedia of Soviet Fighters 1939-51, by Herbert Leonard. Histoires & Collections. Nothing on the I-16 as such, but has lots of useful information on later Polikarpov projects.



The aircraft to the rear is a Type 5, but with later style open cockpit. The aircraft on the right has no access panel on the starboard rear fuselage, so must be earlier than a Type 24 (© Scott Pick Collection)



A Type 29 (note gun barrel at the bottom of the cowl, and air intake to the right). The paint scheme seems to be overall light grey, with a slightly glossy finish (© Scott Pick Collection)



Operation Barbarossa summed up: a wrecked I-16 being passed by a motorised column of German troops (© Scott Pick Collection)

Rata roll-call

Roger Wallsgrove describes the Polikarpov I-16's development and provides a guide to the variants

The Polikarpov Design Bureau dominated Soviet fighter design and production throughout the 1930s. The great majority of Soviet fighters during this period were Polikarpov designs, and until the Spitfire and Messerschmitt Bf 109 entered service the Russians had perhaps the most advanced fighters in the world. They pioneered low-wing monoplanes with retractable undercarriage, cannon armament and other 'modern' features.

In contrast, biplane fighters also stayed in Soviet service until 1941, and development continued long after this format was obsolete — also through Polikarpov designs!

First of the line was the I-5 biplane, an attractive little machine with a radial engine and the classic twin 7.62 mm machine gun armament. Development of this led to the I-15, with the stubby rear fuselage so typical of all subsequent Polikarpov fighters. It also featured a

faired-in 'gull' upper wing. The I-15 saw service in Spain, as did the subsequent I-152 (or I-15bis), the latter reverting to a conventional top wing.

Misinterpretation of the Spanish experiences caused the V-VS to demand a 'new generation' biplane fighter, and the basic I-15 design was reworked yet again to yield the I-153 (or I-15ter), featuring a gull top wing and retractable undercarriage. The I-153 was a splendid little machine, perhaps the

fastest biplane fighter to see service, but it was obsolete before it went into production.

Far too many of the I-15 series were still in service in 1941, but few survived the initial German onslaught. The I-153 remained in service for a while, and was also used by the Finns. Possibly the last ever combat by a biplane fighter came in 1944, when Finnish I-153s encountered some V-VS P-39 Airacobras — amazingly enough, no aircraft were lost



'Red 36' taxis in from another demonstration. You can imagine how little the pilot can see ahead of the aircraft! (© Roger Wallsgrove)



'Red 9' basking in the New Zealand sun (© Roger Wallsgrove)



Framed by the wings of an I-153, this is 'Red 9' again (© Roger Wallsgrove)



Rear view of 'Red 9', giving a good indication of the barrel-like nature of the I-16. Note also the different finish on the metal- and fabric-covered areas of the wings (© Roger Wallsgrove)



Close-up of the cockpit area. The 'approximate' fit of the cowlings panels is typical of I-16s, and the black-outline star is just right for a 1941 aircraft (© Roger Wallsgrove)

on either side!

The other thread of Polikarpov fighter development was the monoplane I-16. This was the world's first production cantilever monoplane fighter with retractable undercarriage and enclosed cockpit, and first flew in December 1933. Series production started in 1934, and the I-16 remained in production until 1941, undergoing almost continuous development and upgrading. The I-16 proved itself in combat over Spain, dominating the skies until the Bf 109 arrived on the Nationalist side, and both the Types 5 (*Mosca*) and 10 (*Super Mosca*) were built in Spain. Other I-16s saw action over China, with some success until the A6M Zero appeared.

Cannon armament was introduced onto some production aircraft in 1938, and the final Types 24 and 29 were much more effective and robust aircraft than their ancestors. Unfortunately this development took the I-16 well past its natural lifespan, and more modern fighters were developed and introduced all too slowly. Replacement by the new 'frontal fighters' (Yak-1, LaGG-3 and MiG-3) had only just started by the time of Operation Barbarossa, and even in

fully developed form the I-16 was no match for a Bf 109E, let alone an -F (though earlier versions had given the Bf 109B a fright in Spain). Flown by gallant and determined pilots, the I-16s had some successes over the Luftwaffe, but most were shot from the sky or destroyed on the ground.

In V-VS service the I-16 rapidly disappeared after 1941, but continued to be used by the Spanish, Finns and Chinese for some years. Indeed the Spanish I-16s were still active in training units until 1953! The UTI-4 2-seat trainers stayed in production until 1942, and over 3,000 were built in total. Until the end of the war Soviet fighter pilots would learn their craft on this tricky little aircraft.

Polikarpov tried desperately to produce a successor to the I-16, in the form of the I-17, I-180 and derivatives, but none was successful. The final development of the I-185 series looked set to be the best Soviet fighter of its time, but Polikarpov's time was past, the line died. My version of the I-16's development history is given here, though I cannot claim 100% confidence in all the details. Corrections and additions welcome.

I-16 Variants and Development

TsKB-12

First prototype, initial flight tests in December 1933. Powered by a 480hp M-22 engine, the Soviet version of the Bristol Jupiter VI. Original drawings featured a Townend ring, but the prototype actually used a parallel-sided NACA cowling. Initial three-blade Hamilton Standard prop later replaced by two-blade Soviet V-22 unit. Fittings for two PV-1 machine guns, one in each wing. Full cockpit canopy, sliding forward to open.

TsKB-12bis

Second prototype, designed in parallel, and intended from the start to have 712 hp Wright Cyclone engine. Tapered engine cowling, area of wing covered with metal increased to improve rigidity. Put into production as:

I-16 Type 4

As TsKB-12bis. Initial production with imported Cyclones, as licence-built M-25 production engine was delayed. Full wheel covers fitted, new pitot tube design, 8 mm armour plate behind pilot. 400 built.

I-16 Type 5

M-25 powered, with new cowlings design. This introduced the shuttered intake plate and characteristic tapered openings for the individual exhausts. PV-1 guns replaced by the much better ShKAS (still 7.62 mm). Provision for bombs under wing. About 1,500 built. In Spanish service the sliding canopy was often replaced with a fixed windscreen, and this modification was introduced onto the Soviet production line, possible at the same time as an M-25A engine was used.

I-16 Type 6

An interesting conundrum! Sources vary markedly on this one, from the Squadron/Signal *In Action* claim that the Type 6 replaced the Type 5 and was built in large numbers, to others which claim this was limited run of aircraft fitted with a third machine gun, intended for service in Spain but never delivered. My favourite Russian book ignores it altogether, and it is not in their production lists.

I-16P

Described in M-Hobby book as 'Type 12'. Possibly as many as 12 built, with



Front view of a Wanaka I-16. Note the undercarriage retraction wires leading from the wheel hubs, the lower main gear doors (rarely seen on operational I-16s), and the shape and style of the air intakes on the cowling. There is no window in the starboard wheel well — one of the features unique to these 'restored' airframes (© Roger Wallsgrove)



More undercarriage details. Note also the metal-covered inner wing section, and the fabric-covered outer wing (© Roger Wallsgrove)



'White 39' in the hangar at Wanaka. Note the hatch in the rear fuselage, and the leather-lined cockpit access doors (© Roger Wallsgrove)

20 mm ShVAK cannon in each wing. Based Type 5 airframe. At least one also retained pair of machine guns in the wings, outboard of the normal fitting. Some sources claim one of the aircraft had fixed undercarriage, but my interpretation of pictures suggests the wheel wells were not plated over, though the gear doors were removed.

I-16 Type 10

Amazing how many references fail to mention the major change on this version, which was the new wing with short-span ailerons, and (for the first time) separate flaps. Initially with M-25A engine, but soon supplanted by more powerful M-25V. Cowling featured revised exhaust port shape, shorter and more rounded. There was also a new T-shaped air inlet at the bottom of the cowling ring. Revised armament, with an extra 2 ShKAS guns in the upper fuselage with characteristic bulges over the breeches. Structural improvements, and extra pilot armour. Supplied to China, and built in Spain as 'Super Mosca'.

I-16 '9211'

Prototype ground-attack version, with fixed undercarriage in trousered fairings

and three ShKAS in each wing, on swivel mounts.

Test version of Type 10 with 20mm cannon in each wing. Supposedly later fitted with four 20 mm cannon.

I-16 Type 17

Production version of the above, with two ShVAK and two ShKAS. Otherwise as Type 10.

I-16 Type 18

Made use of the new M-62 engine, with two-stage supercharger. AV-1 propeller, with larger, blunt spinner and wider-chord blades. Extra air intake above cowling, paired exhaust stacks in lower exhaust ports (to allow for ski undercarriage, bottom ports moved).

I-16 Type 20

Test bed for underwing fuel tanks. Based on an unarmed Type 10, with revised wheel covers. Underwing tanks later used on Types 18 onwards.

I-16 Type 24

The major late production version. Revised and strengthened structure. Tailwheel replaced tailskid. Initial production batch had M-62 engines, but



The cockpit. Of particular note are the 'portholes' in the coaming under the windscreen which help light the instrument panel, and the open handholds just ahead of the padded rim of the coaming (© Roger Wallsgrove)

soon replaced by the intended 1,100hp M-63. AV-I aircrew with new spinner. Large inspection hatch in starboard rear fuselage, and cockpit entry doors on both sides. Over 900 built.

I-16 Type 27

Cannon-armed fighter based on Type 18 airframe and engine, otherwise as Type 17. Total production of Types 17 and 27 was 1,184, limited by shortage of ShVAK cannon.

I-16 Type 29

Last main production version. Basically similar to Type 24, but with 12.7mm UB m/g fitted below engine, with blast tube exiting bottom centre of the cowling ring. The T-shaped air intake, previously in this position, moved to starboard (on early aircraft; later ones had the intake incorporated in the main cowling intakes). Radios fitted to most Types 29. Revised undercarriage, which moved the main wheel-wells outwards, leaving a bigger gap between them. Over 600 built.

I-16 'Type 24 New Zealand'

Seeing these 'rebuilt' I-16s in the air over New Zealand was the highlight of my trip to Warbirds Over Wanaka in 2004 — see photos accompanying this article. They differ in some ways from



Up and away! 'White 39' takes to the skies at Warbirds Over Wanaka 2004 (© Colin Ford)

General

Ski undercarriage could be fitted to many versions. Initially this was fixed, but later retractable skis were developed. In service, the main gear covers were often removed, to prevent a build up of mud when operating from grass airfields. The hinged lower wheel covers were almost always removed in service. Until the last production versions radios were relatively rarely fitted. Many versions were able to mount a gun camera on the

wrong versions of the TB-3 and the I-16! Other I-16s were used as engine test-beds, and turbocharged engines were tested.

Note that photo captions are not especially accurate in identifying the precise version shown. I've seen one source where exactly the same photo is described as both a Type 10 and a Type 24. The details above also relate to Soviet-built machines only, and I've not attempted to cover variations introduced on the Spanish production lines, or field modifications.

I-16 Kits

For such a significant aircraft, its treatment by the kit manufacturers has been scandalous — until very recently.

1/72 scale: The ancient Revell kit, re-released under the Matchbox label, should be avoided at all costs. It is fundamentally inaccurate and has features from several different versions. The Hasegawa kit is much better, but has an inaccurate wing planform. Good source of detail parts (cockpit and canopy, undercarriage, prop) for the more accurate kits from ICM and A-Model. The A-Model Type 5 is very accurate, but a little tricky to build. It also suffers from rather coarse detail parts, so addition of some Hasegawa bits is recommended. If you want an early-style closed canopy, prepare to mould one yourself — the kit item is

horribly thick and opaque. For an open canopy, use the Hasegawa item. A-Model also produce a neat little kit of the I-180, which resembles an I-16 on steroids. ICM have produced the best kit yet of the I-16, in any scale, in my opinion. Their Type 24 captures the look and feel of the *Rata* perfectly. Tamiya (or even Hasegawa) quality it is not, but it builds easily into a splendid replica. Some details are a little coarse, but Hasegawa parts are again useful.

1/48 scale: Until Eduard come to our rescue there was no acceptable I-16 kit in 1/48 scale. The Hobbycraft (now Academy) kits just have too many faults, and are hopelessly compromised as to which variant they represent. Tack on new wings and cowling and you are half way there, but the effort is too much for the rewards.

And in 1/32 scale? I reckon the Azur kit is basically accurate in size and shape, but with minimal details. A good canvas for the modeller to work on, especially now some detail sets are appearing.

Whichever kit you choose, there are lots of little details which need to be checked and added. No kit has the 'portholes' under the canopy which light the instrument panel, and none has the distinctive window in the starboard wheel well. Good reference sources and photos are essential!

SAMI



In their element! A sight not seen since WWII: an I-16 and an I-153 in close formation at Warbirds Over Wanaka 2004 (© Colin Ford)

authentic Type 24s, not least in their lack of flaps. Gorgeous warbirds, but as references for modelling real I-16s they need to be looked at with caution. Powerplant is the Ash 62 radial engine from the Antonov An-2 biplane, which in fact is a development of the M-62 engine used in many I-16s.

UTI-4 Trainers

Built in several versions, but I don't have enough details to distinguish between them. Some built with fixed undercarriage, with the wheel wells plated over. Later versions could carry a plywood 'hood' over the rear cockpit for blind flying training. Listed in some sources as the 'Type 15', and certainly built in larger numbers (3,000+), more than any other I-16 variant.

fuselage spine, just behind the cockpit.

I certainly don't claim this as a definitive description of all the I-16 variations, not least because different sources tell very different stories! Corrections and additions are most welcome, and I recommend careful reading of the references to clarify the story. There were also lots of experimental and research versions, not least the Zveno parasite fighters and dive-bombers carried under TB-3 heavy bombers. These latter were based on the Type 5, with no armament and with a FAB 250 bomb under each wing, and saw active service (with some success) in the early stages of the German invasion. Note that the ICM kit, which claims to reproduce the TB-3 mothership and I-16 parasites, has the



'White 39' heading off over the hills — a magnificent sight (© Roger Wallsgrove)



Supermarine Seamew

Scale: 1/48	Kit No: 72008
Panel Lines: Engraved	Price: £33.50
Status: New Tooling	Decal Options: 1
Type: Resin	
Manufacturer: Karaya	
UK Importer: Hannants	



Kit contents



Denizens



Supermarine Seagull I N-9565 (Pic: Author's collection)

Ever since I saw that fuselage and tailplane in the RAF Museum, Hendon, I have wanted to model the Supermarine Southampton 1, but never been fortunate enough to come across the old Contrail vacform. So, when what looked like a 'mini' version appeared in a piece of artwork in the news columns of March's *SAMI* my thumbs began to itch and I sent off for the Karaya 1/72 resin Supermarine Seamew right away.

This is my first Karaya kit. Since they have only been in business since 2000 and, according to the code number, this is only their eighth product at this scale, that's probably not surprising. I did take notice of their recent two Short floatplane variants, but at the time I was up to my elbows in the Aeroclub Short 184 (*SAMI* November 2005), so things went no further. I expect I will get there in the end, especially with the Fairey Campania, which accompanied this Supermarine release.

A Momentous Year

1916 was a momentous year for Noel Pemberton-Billing and the small aircraft manufacturing concern, which bore his name, at Woolston on Southampton Water.

Noel was a man of great enthusiasms and one of these had nearly led to financial disaster. Following the company's foundation on 27 June 1914, Pemberton-Billing had begun by producing some promising scout designs, but then become hopelessly bogged down with the design and construction of a pair of giant quadplanes, the PB 29E and 31E. These monsters, armed with searchlight and one-and-a-half-pounder Davis gun, were intended to lurk in cloud cover for up to 18 hours at a stretch, and ambush Zeppelins that just happened to be passing by. Doomed from the start, this flawed concept was to linger on in the background until 1917. Noel did not let go easily.

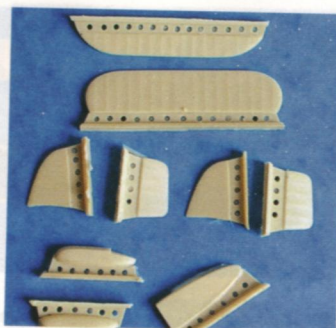
However, in 1916, things began to look up with the confluence of three events.

Firstly, there was the arrival of orders from the Admiralty to build the Norman Thompson N.T.2B trainer flying boat under licence and the Admiralty Air Department's own-design AD two-seater patrol flying boat.

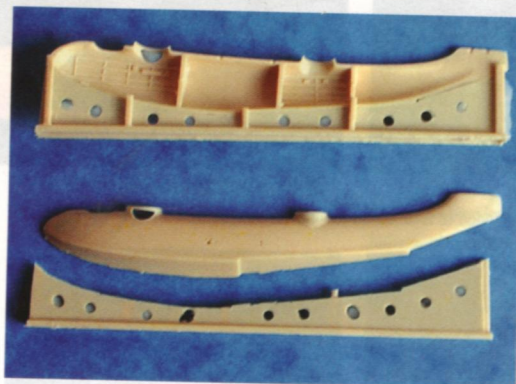
The second event was the arrival of a 21-year-old recently qualified engineer, seeking employment. His name was Reginald Joseph Mitchell. Despite a

Bibliography

- British Naval Aircraft Since 1912, Owen Thetford, Putnam, ISBN 0-370-30021-1
- Schneider Trophy Aircraft 1913-31, by Derek N James, Putnam, ISBN 0-370-30328-8
- British Aircraft Manufacturers since 1908, by Gunter Endres, Ian Allan, ISBN 0-7110-2409-X



Main components for fuselage, wings and empennage



Larger components are only lightly held onto casting gates and easily removed with a scalpel

Interior parts for forward cockpit and the aft observer's position

of the Deep

Neil Pinchbeck builds the Karaya Supermarine Seamew 1/72 resin kit and recalls some of the other sea creatures from designer R J Mitchell's early years with the company

certain patrician reserve, Mitchell was very enthusiastic about the small flying boats passing through the works and seemed to have some promising ideas of his own.

Thirdly, all of this precipitated a new enthusiasm in Noel Pemberton-Billing, who determined that from this point on his company would major on aircraft that operated over the sea, or supermarine. Noel liked the sound of those words. They certainly rolled off the tongue more satisfactorily than his own hyphenated surname, and in December 1916, Pemberton-Billing Ltd became the Supermarine Aviation Works Ltd.

So it was that all the ingredients were set in place that were to become fused together in lasting fame by the word 'Spitfire'. But some 18 years were to elapse before that came to pass and much water was to flow beneath many hulls.

By the beginning of the 1920s, Reginald Mitchell was rapidly rising through the drawing office ranks at Supermarine. Under the mentorship of



Supermarine Seal N-146 (Pic: Author's collection)

Managing Director Hubert Scott-Paine, the company's output became focused around Mitchell's developing ideas about flying boats and amphibians. From this point on the story takes two distinct but intertwined threads.

Boxing Clever

I do like it when the box is right. Lift-off lid with good quality artwork describing the colour scheme. Solid corrugated card

tray base to protect the delicate resin parts. All this tells of people who value their product and their customers. Very nice, but what's inside?

There are three pinch-and-seal plastic bags, instruction and scale three-view drawing sheets together with decal sheet. The larger bag contains fuselage halves and mainplanes with separate ailerons with the tail empennage and a separate single piece elevator. The second bag

contains a pile of detail parts, which I was to come to believe at one point, were multiplying in the bag! Finally, a small bag holds an etched fret with cockpit details, scarf ring arms and other details. There is also a small printed clear sheet with dial faces and windscreen.

All are simply superb in quality. Karaya have certainly jumped straight in to the Premier Division of resin kit manufacturers.

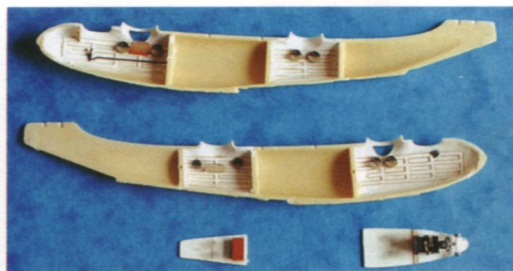
Inside Story

The larger components are lightly held onto casting feeds, and it is a simple matter to separate them with a scalpel. Once the fuselage halves were separated from their sprues, I gave them a light rub on a flat sheet of wet 'n dry to ensure a good mating edge.

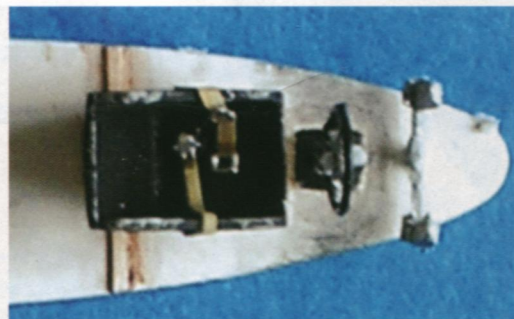
The next step was to gather together all of the interior parts for both the forward cockpit compartment and the aft observer's position. This included separating the etched throttle control and pilot's lapstraps. Taking my cue from what I remember of the Southampton 1



Fuselage halves prepared for mating with a light rub of wet 'n dry paper



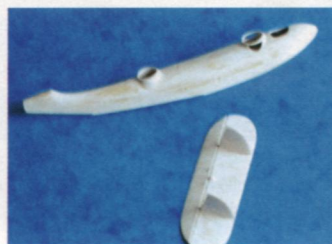
Hull interior painted white with small parts in natural colours



Fit of fuselage halves was very close to perfect with only a touch of filler needed to level up on the dorsal surface



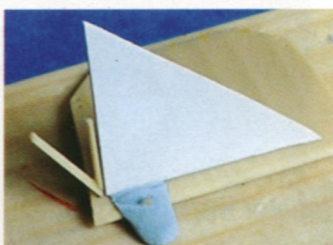
Tail components ready for preparation and in progress



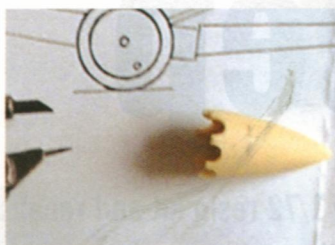
Fuselage and tail primed with matt white enamel to show up any 'glitches'



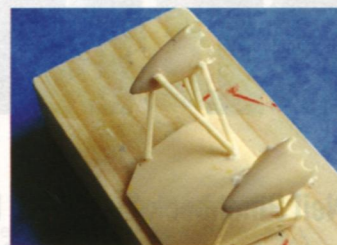
"Time is well spent sitting down with the plan to sort out which struts go where"



Card right angle template and a pair of compasses were used to align engine nacelle struts



Nacelles fixed to struts, and bracing struts added



hull at Hendon, I painted the interior white, with the various small parts in their natural colours.

With the inside story complete, it was time to join the fuselage halves. The fit was very close to perfect and it was a bit of a problem to apply superglue and maintain this alignment. The little bit of filler necessary to level up on the dorsal surface is a testimony to just how difficult I found this!

The Schneider Connection

In 1913, Jacques Schneider, son of a wealthy French armaments manufacturer, had instituted an annual competition for seaplanes. Schneider was introduced to flying by Louis Blériot, and sought to combine the new thrill of aviation with his own enthusiasm for hydroplane racing. These speed trials were to be over at least 150 miles of open sea. Teams of up to three entrants were to compete for a very grand trophy and £1,000 prize money, provided for the first three



Supermarine Seagull III N-9647/41 of No 440 Fleet Reconnaissance Flight circa 1923 (Pic: Author's collection)

years by Schneider himself. The winning nation would host the next contest and any country to win three times in five years would hold the trophy permanently. The first competition took place off Monte Carlo on 16 April 1913 and no one was too surprised by the French victory. One year later, a

Sopwith Tabloid turned the tables.

The intervention of the Great War meant that it was 1919 before Bournemouth could host the next competition. Just along the coast at Southampton, the Supermarine company found the challenge irresistible and entered a modified

version of their N.1B Baby. Called the Sea Lion, on account of its 450 hp Napier Lion engine, it was holed and sank whilst taking-off in fog. Further accidents and a series of organisational blunders caused the event to descend into farce. The race was declared void. Several weeks later, the committee of the Royal Aero Club awarded an honorary victory to Italy.

Tail First

First of the flying surfaces to go on was the tail unit. Once again, the first step was to find all the relevant parts, separate them from the casting sprues and ensure straight edges. At this stage I primed the fuselage and tail with thinned matt white enamel to show up any 'glitches'.

Strut Sort-Out

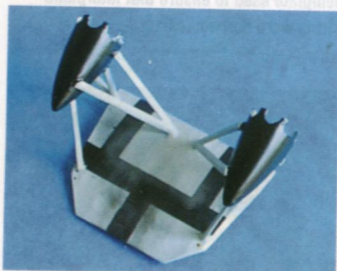
It's been my experience that a potential problem with this sort of kit is that you get lots of different types of strut and no means of identifying them. Parts are



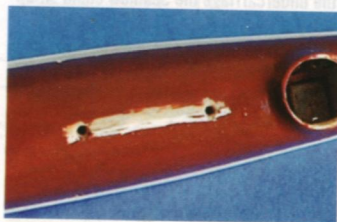
Lower section of hull painted white



Main hull and tail unit sub-assemblies come together



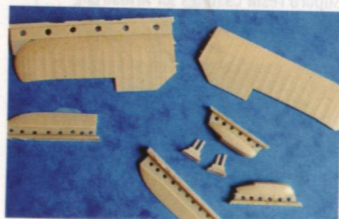
Lower wing centre-section with black walkway decals applied



Before the centre-section could be fixed to the fuselage, location lugholes and a dorsal section between them had to be stripped of paint



Centre-section installed and model inverted to make up underside 'N' struts from the individual sections provided in the kit



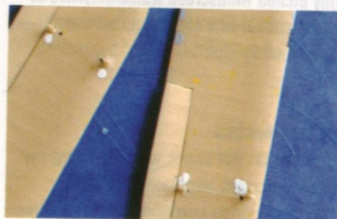
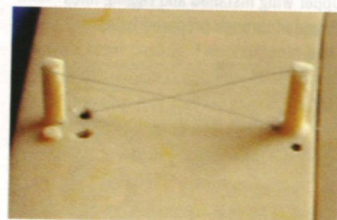
Lower wing outer section components



Neil made holes for nylon monofilament rigging with a heated fine steel needle



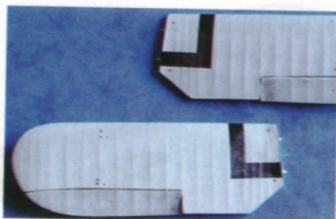
Ailerons set in place, followed by the float struts



Rigging anchored with a small drop of superglue and holes filled with correction fluid and sanded flush



Float bracing wires made from short lengths of synthetic brush bristle



Lower wing uppersurfaces painted aluminium and decaled with walkways



Large RAF roundels applied to lower surfaces

rarely numbered in resin kits and although they appear on the exploded views which usually constitute the instructions, axonometric projection distorts them to the point where they are often unrecognisable. This is where a scale three-view drawing is invaluable since it is the only place where the true length of most struts appears. It is time well spent to sit down with the scale plan and sort out which struts go with which assembly.

Daily Bread

If Supermarine's first foray into racing ended somewhat ignominiously, there was at least some spin-off into the side of business where the company had to earn its daily bread. The lessons learned from the Sea Lion were fed into a single-seat deck landing amphibian fighter called the Sea King. This concept did not find favour in official circles, but Mitchell continued to develop the deck landing amphibian concept with a larger, three-seat spotter



Supermarine Southamptons S1226 and S1229 over Plymouth (Pic: Author's collection)

aircraft. Called the Seal, this machine made its first appearance in 1921. Although rather lukewarm, there was now at least sufficient official interest to spawn some development aircraft together with a name change to Seagull I and Seagull II.

Engine Room

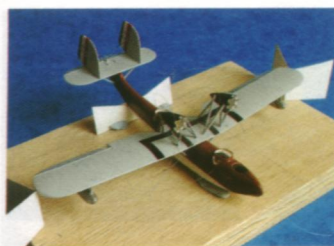
Having identified the necessary struts, the next task was to perch the two engine nacelles on top of the lower wing centre section. The key to this was to get the inner leg of the two front 'V' struts vertical. I made a simple card right angle

template to do this. I then used compasses to step off from the scale drawing how far the nacelle protrudes in front of this 'V' strut. The nacelles were then fixed to the struts, making sure they were horizontal. The bracing struts were then added.

Painter and Joiner

It was now time to do a bit of painting and decaling before the assembly process made certain parts inaccessible. Although I'm a brush painter at 1/72, I masked and sprayed the lower section of the hull in white.

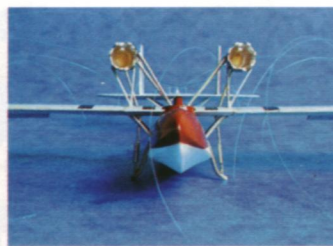
I now had three subassemblies ready for joining up. First to go on was the tail unit with the addition of its underside bracing struts. The lower wing centre-section needed to have its black walkway decals applied at this stage. These were slid into place beneath the engine nacelle struts. I weathered them a bit with some home-made silver graphite powder. Before this unit could be fixed in place on top of the fuselage,



A simple jig held the fuselage straight whilst the lower wing sections were supported at the correct dihedral whilst the glue set



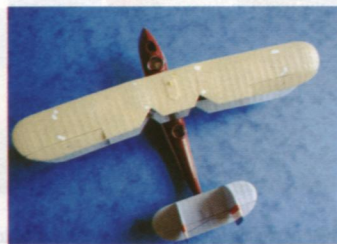
Once model had been inverted for installation of the undercarriage the Seamew could sit up and take notice!



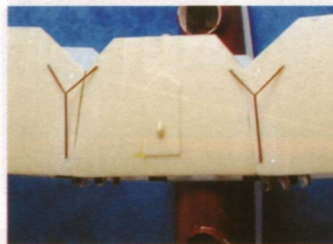
Template used to ensure that interplane struts were perpendicular



Upper wing installed and rigging lines threaded through prepared holes



Rigging secured by drops of superglue and trimmed off before etched folding wing bracing mechanisms were added



Superb resin castings for Armstrong Siddeley Lynx IV engines



"Lewis guns and Scarf rings are the most detailed I have seen at any scale, with gun foresights and backsights virtually microscopic"



Two halves of the minute pitot head had to be joined and the bracket parted and bent outward, before fixing to port interplane strut



Tiny etched windscreen frame attached to acetate sheet with clear picture varnish — "pretty sticky stuff"

the location lugholes and a dorsal section between them had to be stripped of paint. Then the wing section was glued in place and the model inverted to make up the underside 'N' support struts from the individual sections provided.

Schneider Revisited

Nettled by the failure of 1919, Hubert Scott-Paine determined that Supermarine should return to Schneider Cup racing, even though it meant putting his own money up front. This he did and was matched by H T Vane, managing director of the Napier Engine Company, who supplied the latest Lion engine. Nothing was wasted and Reginald Mitchell re-jigged the Sea King fighter to become the Sea Lion II.

This time their efforts were crowned with success, as between 10-12 August 1922, the Sea Lion II completed 13 laps of the Bay of Naples, covering 177 miles in record time. Not only did they take the trophy for Britain, but in doing so prevented a third home win within the terms of which would have allowed the Italians to keep the trophy permanently.

Wing Things

The components for the lower wing outer sections were now gathered together. These included the wing tip floats and their short struts. I decided to rig this model with nylon monofilament



Supermarine Southampton IIs of 201 Sqn RAF circa 1930 (Pic: Author's collection)

fishing line. I made fixing holes for the line in the wing sections with a heated fine steel needle. I use a nightlight for the heating and held the needle in a pair of forceps. The ailerons were set in place, followed by the float struts. With the rigging lines anchored by a small drop of superglue, the holes were filled with typewriter correction fluid before being carefully sanded flush. The floats were fixed on the struts and bracing wires added from short lengths of synthetic brush bristle.

All surfaces of the lower wing were

now painted aluminium dope and decaled on the upper surfaces with the walkway extensions, and-on the underside with service roundels. I cut these so that the section running onto the aileron was physically separate.

I made a simple jig to hold the fuselage straight on a centreline whilst the lower wing sections were supported at the correct slight dihedral whilst the glue went off. The model was then inverted and the retractable amphibian undercarriage legs put in place. Now the Seamew could sit up and take notice!

Upper Reaches

I started on the upper wing by using my little cardboard template to set the interplane struts perpendicular. The three sections of the upper wing were joined on a flat surface before I began painting the underside. The upper wing was then set in place and the rigging lines threaded through the prepared holes. With the lines locked with a drop of superglue and trimmed off, the holes were once again filled with typewriter correction fluid and sanded flush. The folding wing bracing mechanisms were added, from the etched fret, before painting the upper surface of the upper wing.

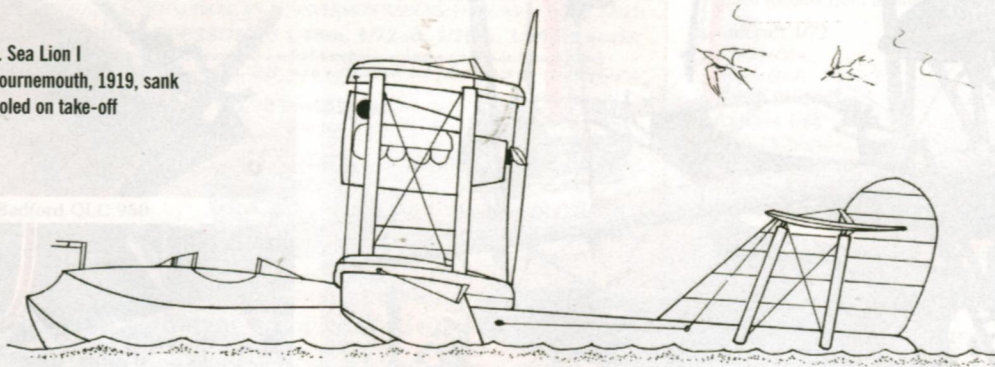
Meanwhile, back at the drawing board...

In the same year as their triumph at Naples, Supermarine exhibited the Seagull III at the RAF Hendon display. Officialdom was still extremely wary of Mitchell's amphibian concept and the production order, when it came, was for just six aircraft. These equipped 440 (Fleet Reconnaissance) Flight embarked aboard HMS Eagle, serving mostly in the Mediterranean. Another six went to the Royal Australian Air Force and were to carry out the historic photographic survey of the Great Barrier Reef.

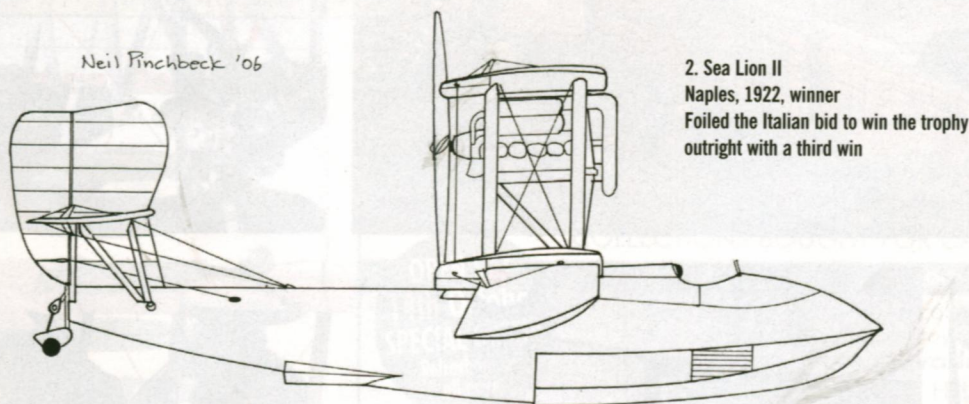
Unable to subsist on this meagre fare, Supermarine decided to invest Mitchell's hull design talent and

Supermarine Schneider Trophy Designs 1919–1924

1. Sea Lion I
Bournemouth, 1919, sank
Holed on take-off

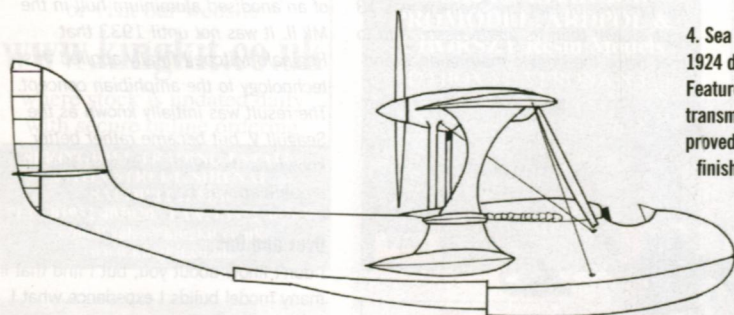
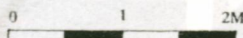
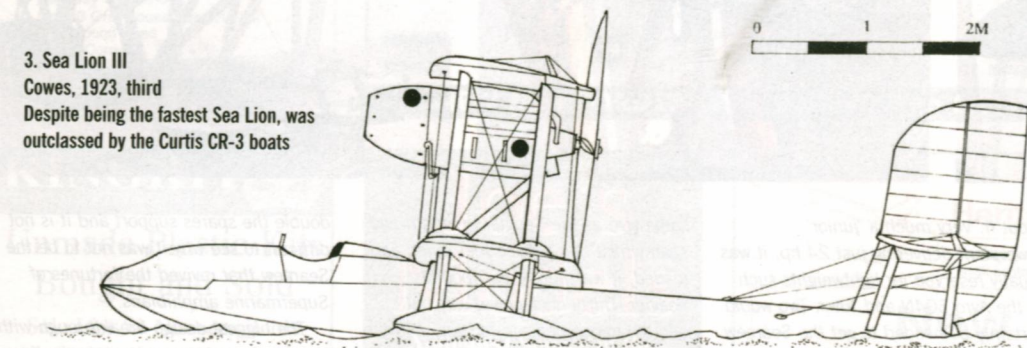


Neil Finchbeck '06



2. Sea Lion II
Naples, 1922, winner
Foiled the Italian bid to win the trophy
outright with a third win

3. Sea Lion III
Cowes, 1923, third
Despite being the fastest Sea Lion, was
outclassed by the Curtiss CR-3 boats



4. Sea Urchin
1924 design scheme
Featured a hull-mounted engine with geared
transmission shaft to propeller nacelle. It
proved too complicated and was never
finished. At this point Mitchell abandoned
pusher biplanes. The next
Supermarine entry was the S4 of
1925, a tractor cantilevered
monoplane. The way lay open to
the Spitfire!

with Johnsons Klear, which prevents clouding with superglue, but the glue itself will dry clouded and any slight overspill will show. In the end I used clear picture varnish, which proved to be pretty sticky stuff.

I had better add a note about decals here. They are superbly printed, both for register and colour density. They are very thin, and therefore need careful handling. It's a minor pity that there are only codes for one of the two Seamew prototypes.

Base Thoughts

Whilst I was thumbing through my vintage photos of Supermarine types, I came across one of a Scapa perched on a quayside somewhere in the 'Med', and thought I'd like a bit of quayside for my Seamew. I'd just finished (well, half-finished) a DIY project and had a nice piece of 19 mm ply which I faced up with plasticard off-cuts. The woodwork is also plasticard and the beach is brick dust mixed with PVA glue.

Air bubbles do not feature much in Karaya's resin casting. I encountered just three in this whole build. However, the way of the world is such that one of these was right on the tip of one of the propellers. It would have been difficult to repair, so I painted it as a damaged prop, being removed for repair. This gave me the opportunity to leave off the front of the port engine cowl and photograph one of those lovely engine castings. I then decided to finish the photograph sequence by adding back the engine cowl and damaged propeller, but I don't think you'd have noticed if I hadn't told you.

End of a Chapter

With just 12 months between Supermarine's triumph at Naples and the 1923 Schneider Cup off Cowes on the Isle of Wight, Reginald Mitchell re-designed the Sea Lion's tailplane and nose and Napier supplied their latest Lion engine. It was not enough. Despite being the fastest Sea Lion, G-EBAH and Supermarine's Chief Test Pilot, Henri Baird, could only manage third place behind two Curtiss CR-3 machines.

Mitchell realised that radical ideas were needed to stay ahead and produced the Sea Urchin for the 1924 season. It featured a hull-mounted engine with geared transmission via a shaft, to a propeller nacelle above. This proved too complicated in practice and was never completed. Mitchell now abandoned pusher biplanes. It was the end of a chapter in Supermarine's Schneider racing story, but by 1925 they were back with the very different S4 and, at last, the way lay open to the Spitfire.

Meanwhile, back in the prosaic world of service aircraft, another chapter was also drawing to a close. By the end of 1925, No 440 Flight had given up their Seagull IIIs in favour of the Fairey III D. The deck-landing amphibian disappeared from the Fleet Air Arm inventory. At the same time, the Southampton flying boat was going from strength to strength, and in 1928

experience in bigger things. In 1924 they produced a 75 ft wingspan military flying boat. A development of the civil Swan, the new machine was called the Southampton. It was a great success and nearly 70 served the RAF worldwide throughout the late 20s and early 30s, the last not retiring until late 1937.

Early Southampton Is retained the wooden hull structure used in both the Sea Lion and Seagull series. The hull and tail of the Southampton I N9899 can be seen in the RAF Museum, Hendon.

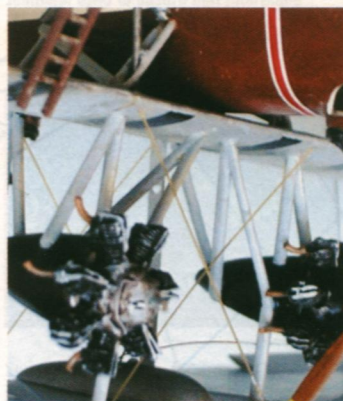
Details, Details

The engine castings are really superb, but adding a single exhaust pipe the back of each cylinder head is the nearest thing to a tedious process on this build.

The Lewis guns and Scarf rings are the most detailed I have seen at any scale. The gun foresights and backsights are virtually microscopic. I have a deal of sympathy for the SAMI reviewer who wrote that the only purpose that he could see for etched parts was to have something to stick to his thumb. Nevertheless, after a struggle, I seemed

to manage even with the two halves of a minute pitot head, which have to be joined and then the bracket parted and bent outward before fixing to the forward port interplane strut.

The last problematical etched part to be dealt with was the windscreen frame. This was not one of the smallest parts but the problem was how to stick it to a piece of clear sheet. I have PVA glue, which is supposed to dry clear, but after a try-out I found that this brand producer's idea of clear was not the same as mine. I can coat the clear sheet



Mitchell made an attempt to revive the Seagull theme with the Seamew. Looking like a scaled down Southampton I in many ways, the Seamew hull and tail obviously owed a lot to lessons learned from the larger aircraft.

The choice of Armstrong Siddeley Lynx engines as the powerplant for the Seamew is perhaps the strangest thing

about it. Very much a 'junior' powerplant delivering just 24 hp, it was usually reserved for lightweights such as the Avro 504N and Tutor. Two would certainly be needed to get the Seamew to 'unstuck' and between them they only delivered 30 hp more than the single Lion of the Seagull III.

The Seamew was almost exactly the

same size as the Seagull in length and span whilst being three feet taller, and loaded, it was nearly 150 pounds heavier. Thirty horsepower was not enough to compensate for this, and the increased drag from twin nacelles and tail fins meant that the Seamew was 13 mph slower than its predecessor. Add to that twice the engine maintenance and

double the spares support and it is not difficult to see why it was not to be the Seamew that revived the fortunes of Supermarine amphibians.

The biggest design breakthrough with the Southampton was the introduction of an anodised aluminium hull in the Mk II. It was not until 1933 that Reginald Mitchell finally applied this technology to the amphibian concept. The result was initially known as the Seagull V, but became rather better known as the Walrus. At last, the amphibian was back.

Over and Out

I don't know about you, but I find that in many model builds I experience what I call 'The Wall'. That is a stage at which minor mistakes accumulate and everything I do just seems to make things worse. This has to be got through to finish the model, and in my case, that doesn't always happen. Such is the quality of this kit that there was no such experience and there certainly could not have been with something this complex.

I have been hoping for some years now that a top eastern European resin manufacturer would notice British between-the-wars flying boats, float planes and amphibians, and do for them what Choroszy has done for similar Japanese types. I do hope it's Karaya.





Heinkel 112 V6

Scale: 1/48 Kit No: RM4809

Panel Lines: Engraved Price: EXXXX

Status: New Tooling Decal Options: 1

Type: Resin

Manufacturer: REST Models

UK Importer: NeOmega



Decal sheet for the He 112V6 during operational testing with General Franco's Nationalist forces in Spain



Kanonenvogel

Heinkel's elegant He 112 lost out to the Messerschmitt Bf 109 in the Luftwaffe's mid-1930s fighter competition. Lynn Ritger traces its history and builds REST Models' 'exquisite' 1/48 scale resin kit of the He 112V6 prototype

In February 1934, just 13 months after the Nazis' ascension to power in German elections, a government specification for a high-speed, single seat fighter was presented to three German aircraft manufacturers: Arado, Bayerische Flugzeugwerke, and Heinkel. The Arado firm of Warnemünde designed an elegant, light aircraft with fixed gear designated the Ar 80, while BFW, under the direction of Willi Messerschmitt, submitted a remarkable, all-metal monocoque design with an enclosed cockpit and retractable landing gear, known as the Bf 109. Ernst Heinkel's firm was considered to be the early front-runner in the design competition based solely on his reputation. Heinkel was a major manufacturer, and the new He 70 Blitz single-engine airliner was an

absolute revelation to an industry still accustomed to canvas-covered biplanes. Heinkel's design for the new fighter was penned by the Günther brothers, and borrowed heavily from design elements introduced on the He 70, a fully monocoque design featuring an elegant elliptical wing planform with a distinct gull-wing effect, retractable gear, and an open cockpit.

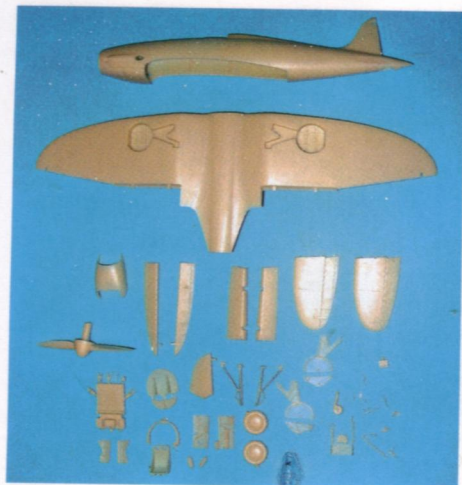
The resulting He 112V1 (coded D-IADO, W/Nr 1290) was a fantastic example of Art Deco-era streamlining. The aircraft was all curves from stem to stern, painted in overall light grey with Heinkel's characteristic black trim around the nose. However, the Heinkel design was already at a disadvantage before its first flight in September 1935. The competing Bf 109V1 had already

flown more than three months previously, on 28 May 1935. The wings of the He 112V1 were found to be too long and too thick, so a slightly shorter wing was installed on the He 112V2 (D-IHGE, W/Nr 1291). This airframe was the primary flight test aircraft for the RLM's fighter competition, but could still not match the overall performance of the Bf 109V2. Additional changes were made to the He 112V3 (D-IDMO, W/Nr 1292), but these, too, were insufficient to meet the standard set by the Bf 109. Ultimately, Messerschmitt's design was chosen for series production not just because of its performance, but its ease of maintenance and construction played a huge part as well. The elliptical wing of the Heinkel was highly labour intensive to construct and repair, and little thought had been given to ease of maintenance.

Despite having lost the overall fighter competition, Heinkel was still awarded a production contract for a small series of 15 A-0 series aircraft, beginning with the He 112V4 (D-IDMY, W/Nr 1974). The V5 (D-IIZO, W/Nr 1951) was completed in July 1936, and eventually purchased by Japan in 1938. The subject of this article, the He 112V6 (W/Nr 1952), was also completed in July 1936. Initially carrying the civil registration D-IQZE and finished in overall natural metal with the exception of the grey-painted cowl area and inspection panels, there was one significant difference between the earlier



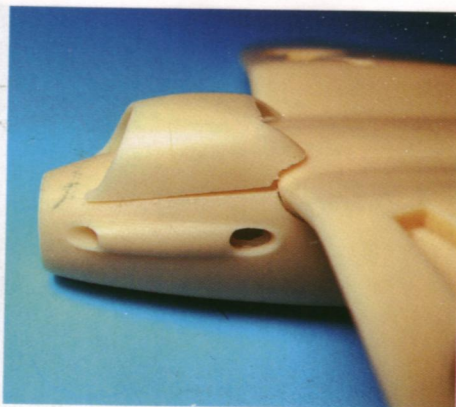
The He 112V6 '5-1' pictured in Spain with a Bf 109 prototype



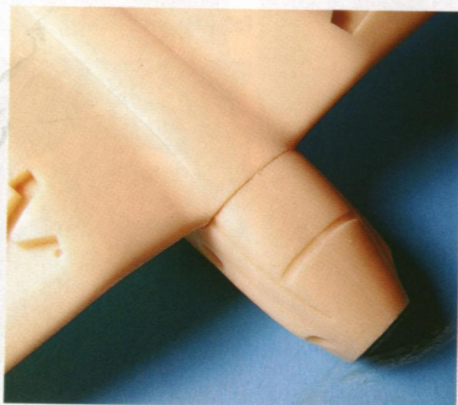
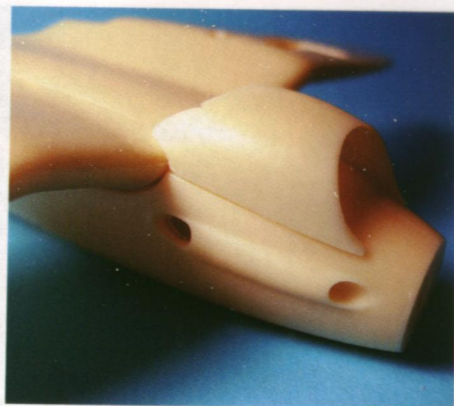
Kit parts include one-piece fuselage and wings that are "absolute masterpieces", and wire-strengthened resin main undercarriage legs



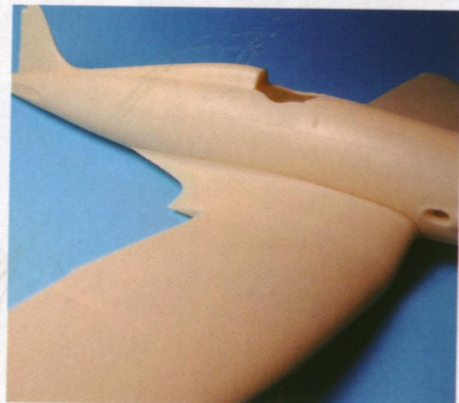
"Cockpit detail looks very convincing under a coat of RLM 02 and a wash and dry-brush session"



"If the kit has a weak point, this would be it." Despite filing, radiator bath left significant gaps where it met the cowling



"That gorgeous wing could now be mounted to the fuselage." A small amount of filler was needed at the underside joint, but the uppersurfaces wingroot fitting was perfect, and joining took less time to do than to describe



He 112 prototypes and the V6- this aircraft carried a 20 mm MG C/30L cannon installed on the centreline and firing through the propeller hub.

The aptly nicknamed *Kanonenvogel* (cannon bird) flew in a number of armament trials in Germany before being sent to join Gen Francisco Franco's Nationalist forces in Spain for operational testing, along with three prototypes of the Bf 109, in December 1936. Here, the aircraft was the responsibility of Oblt Günther 'Fips' Radusch, who flew the aircraft on ground attack sorties against Republican targets, in cooperation with the recently arrived Henschel Hs 123 and Junkers Ju 87A Stukas. By March 1937, the V6

(then coded 5-1) was transferred to 2/J 88 which was based at Almorox, near Toledo. On 16 March, word was received at the base of a Republican armoured train nearby, and the fighters of 2/J 88 took off to attack it. Among the personnel still at the base after the fighters departed was an He 45 crewman from A./88, an observer named Wilhelm Balthasar. Oblt Balthasar spotted the V6 sitting idle, and in one of those moments of clarity where one realises it is often easier to ask forgiveness than permission, he approached the field commander with a request to fly the V6 to attack the train. Somehow he managed to bluff the commander into believing he was

experienced on type, and after a quick cockpit check he took off. He spotted the train at the Seseña railway station, and after several strafing runs the entire train exploded when Balthasar's rounds struck the ammunition car. On his return to base, he also strafed and destroyed a Republican tank.

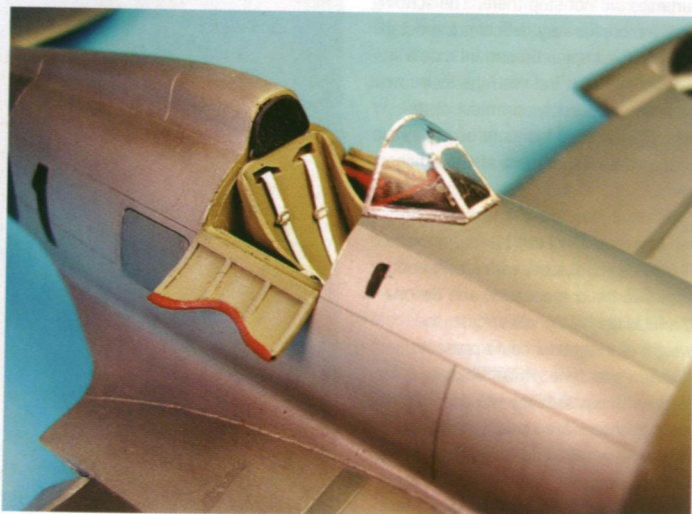
This was the start of a brilliant career for Oblt Balthasar. He was soon given command of a small combat unit with the V6, and was the Staffelfkapitän of 1./JG 1 at the outbreak of the Second World War. He would eventually become the top-scoring Luftwaffe ace in the Battle of France, and would rise to command JG 2, the famous 'Richthofen Wing', in January 1941. Balthasar was

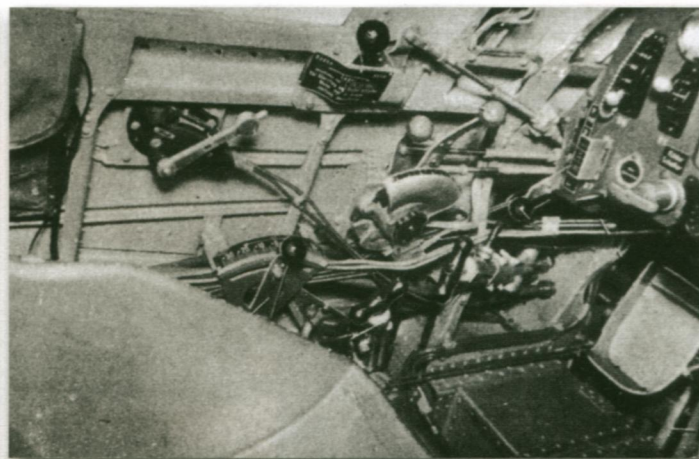
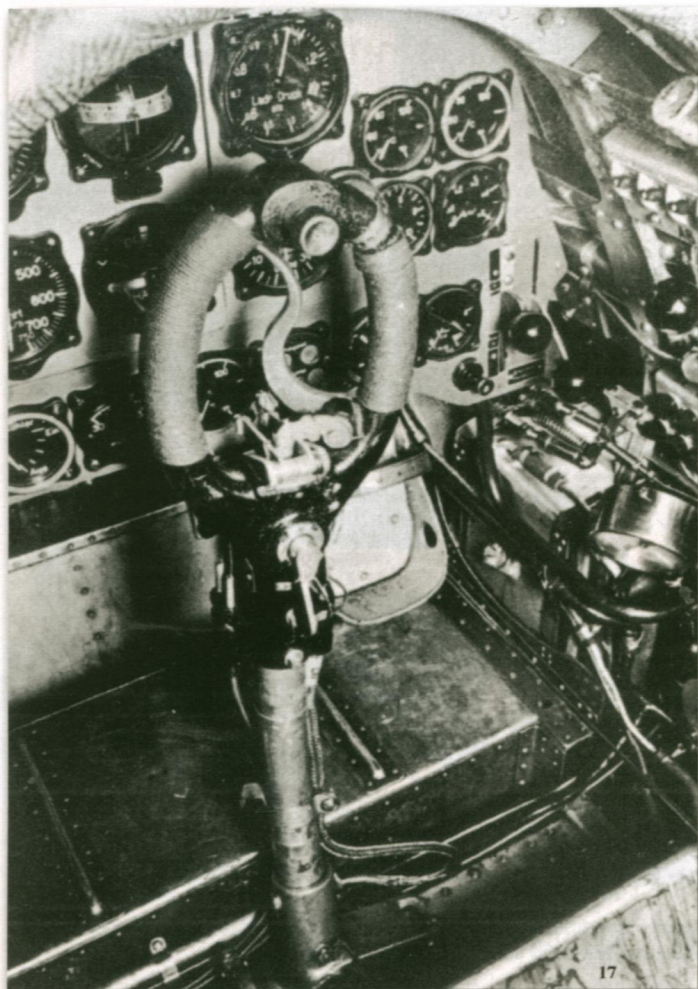
eventually killed on 3 July 1941 when the wings of his Bf 109F-2 were ripped off as he pulled out from a steep dive.

The V6 would eventually be written off in a forced landing on 19 July 1937 while being flown by Uffz Max Schulze; as he approached his airfield at low speed, the engine suddenly locked up and the aircraft hit the ground with sufficient force to break the fuselage just aft of the cockpit. Schulze was uninjured, but the operational days of the *Kanonenvogel* were over.

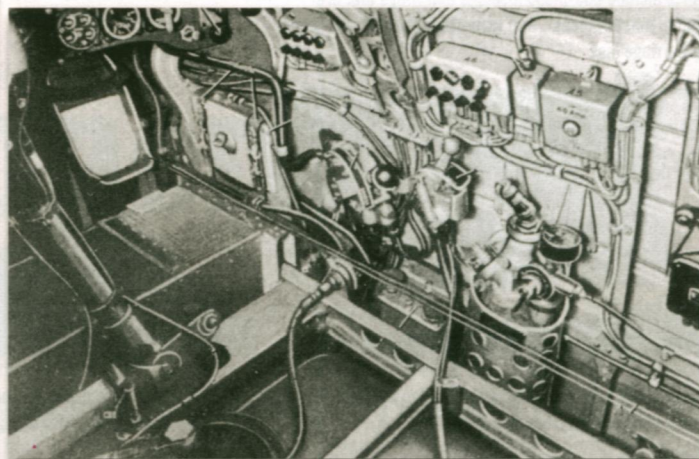
The Kit

Surprisingly, the early Heinkel He 112 variants have been very poorly served by the modelling world; there have been a





Full-size cockpit detail



few He 112B models, including a nice 1/72 version by Heller and a pair of 1/48 releases by Classic Airframes, but the swoopy prototypes and 'A' model have been all but ignored...until now. REST Models, a new firm based in the Ukraine, has produced a 1/48 scale He 112V6 in resin, and it is positively *exquisite*. The fuselage and the wing are each cast as one piece of resin, and they are absolute masterpieces. When I first laid the two pieces together to test the fit, I was absolutely astonished to discover that there was little or no gap at the wingroot — this is a feat unheard of for most injected plastic kits, let alone a limited-run resin offering! But the surprises did not stop there. The scribing on the model is very delicate, the detail parts are just splendid and include a small photo-etch fret with the instrument panel and seatbelts, and most of the other major components fit nearly as well as the wing... more about which anon.

Another pleasant surprise was the landing gear. The He 112 had a multi-link retraction system with several odd angles to the components, and despite the fuselage being hollow-cast, the weight of the model could present a problem over time. REST Models foresaw this possibility, however, and the main gear legs are actually cast with steel wire within, and these caused no issues when time came to attach them. Other noticeable inclusions were a pair

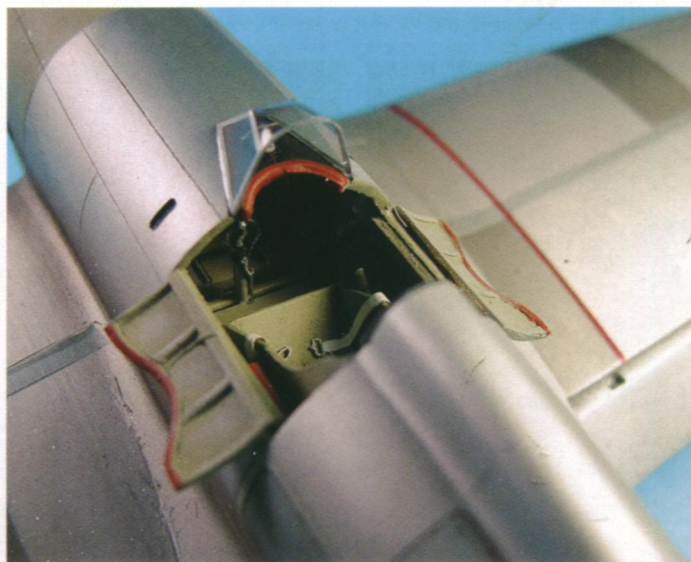
of vacformed canopies, a separately moulded set of cockpit doors for those who choose to pose the aircraft 'open', a beautiful resin propeller which again puts most plastic kits to shame, separate ailerons, flaps and rudder, and a large decal sheet with the oversized Spanish Nationalist insignia for the wings. Regarding the propeller, the V6 had a standard two-blade VDM unit fitted when it crashed, but many earlier operational photos show a three-bladed unit. For those so inclined, it may be possible to rob the blades from a Bf 109E kit and modify them to work with

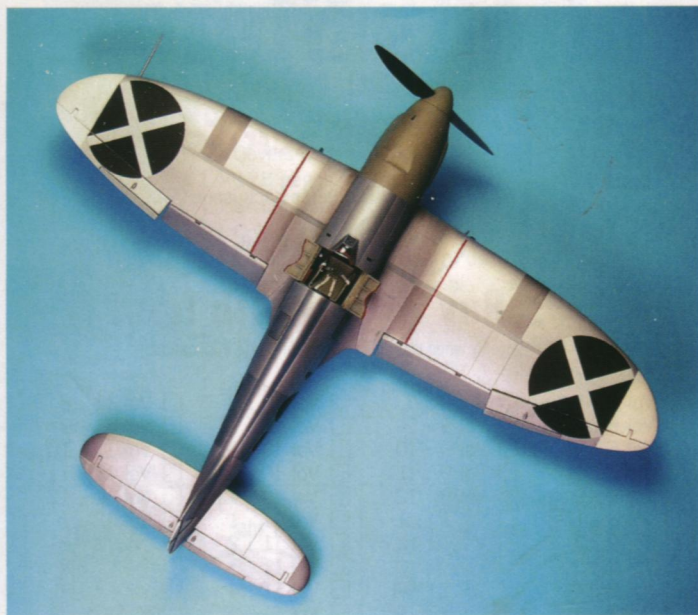
the kit spinner.

Construction of the kit is fairly straightforward, simplified somewhat by the one-piece wing. I first assembled and painted the cockpit, which looks very convincing under a coat of RLM 02 and a slight wash and dry-brush session. You will want to take care in mounting the instrument panel and control stick; I had to move the stick slightly rearwards and adjust the fit of the panel to get a proper depth to the whole affair. After affixing the sidewalls to the fuselage interior, the cockpit floor and aft bulkhead assembly simply slips up from

beneath. Run a bead of superglue around the bottom edges, and Bob's yer auntie. With the cockpit installed, that gorgeous wing could now be mounted to the fuselage. I ran a thin line of gap-filling superglue around the circumference of the wing mounting area on the fuselage, and the whole affair was done in less time than it takes to describe it. A small amount of filler was necessary on the underside joint where the aft part of the wing meets the fuselage, but this was easily taken care of. From here, I mounted the tailplanes, taking care to align them properly with the wing, and then moved to the radiator bath.

If this kit has a weak point, this would be it. The radiator faces had to be carefully filed down to match the lower cowling contours, then the upper edges of the bath still left significant gaps where they met the cowling. Blending-in these joints was time-consuming, as there is quite a bit of detail that one must take care not to obliterate. It took several attempts, but a satisfactory conclusion was eventually reached. Attaching the ailerons was also slightly dicey, as they are a bit too long at their inboard sides as cast. I carefully sanded them back until they fitted perfectly, then posed them fully deflected. Once again showing the superb engineering that went into this kit, the flaps attached flawlessly to the wing. I posed them lowered, but they will fit perfectly in the





raised position as well... again, lessons for plastic manufacturers to draw from. Well done REST!

At this stage, the airframe is essentially complete. I dry-fitted the main gear legs to the wing, and then attached the retraction struts and gear doors right to the legs without mounting them to the wing. This allowed me to set the completed units aside and spray the assemblies in RLM 02 all at once. Although there was no trace of mould residue on the surface of the kit, I did give it a quick wipe with thinner, then sprayed most of the airframe with flat white as a primer. After a thorough wet-sand to eliminate any roughness, I reshot white on the wingtips, masked those off, then sprayed the cowlings area with Model Master's RLM 02, as seen in period photos. REST's painting instructions would have you finish the entire aircraft in natural metal, but photos of all the early He 112V and A aircraft show the engine cowling being one solid shade of grey. Once this was dry, I carefully masked the cowlings, and got to work on the natural metal finish.

Ask 30 modellers what they prefer for a natural metal finish, and you'll likely get 15 answers. Half will say "Alclad", and the other half (including me) who are too cheap to spend over \$8 per diminutive bottle of paint will come up with something else. My preference is to use Floquil's Old Silver and New Silver, polishing with SNJ Aluminium Powder where a shine is required, and it usually



works well. On the He 112 it worked fine as well...for about half the airplane. I painted the propeller blades and polished the fronts with SNJ, which came out beautifully, but things rapidly went south from there. I had apparently not done a thorough job of removing some residue from the wings, as the Old Silver bubbled and ran and just generally looked like crap. Much colourful

language ensued, and the model was set aside for some time. After a while, I resanded the upper wings and fuselage, and reshot the Old Silver with no further difficulties. Once this was fully dry, I then masked random panels and airbrushed Metalizer shades (magnesium, steel and aluminium) on random panels for more visual interest.

Several light coats of Johnson's Future (Kleer) then provided a nice glossy base on which to apply the decals, which went on without too much fuss. The fully deflected ailerons proved to require some touching up later, and the underwing stripes (three given, although photos only show two per side) do not quite match up with the leading-edge profile. I didn't catch this until later, so the stripes look staggered on the leading-edge when viewed head-on. Not a big deal, but something other builders might want to note. At this point I also masked and painted walkway stripes in

a custom dark red mix to approximate RLM 28 *Weinrot*. The painted gear assemblies were then attached to the aircraft, as were the rudder and cockpit doors, and the entire model was given a light dusting of Testors Dullcote, as the real aircraft was rather worn while in service. The wheels were then added, as was the vacformed windscreen...once again, a nearly perfect fit, thanks to small channels cast into the upper fuselage surface. A bit of careful weathering was applied with pastel chalks, and the model was complete.

Overall, this is one of the finest kits I have had the pleasure to build. REST Models has a limited catalogue at the moment (see www.neomega-resin.com/rest.htm for UK supplies), but if this He 112 is any indication of their future direction, they will deserve every bit of success they achieve.

SAMI





Grumman F11F-1 Tiger

Scale: 1/48 Kit No: 6045
Price: £44.60 Panel Lines: Recessed
Status: New tooling Decal Options: 3
Type: Injection Moulded plastic
Parts: Plastic 33, Resin 15, Metal 19, Etched 13
Manufacturer: Fonderie Miniatures
UK Importer: Hannants



Tiger, Tiger

Jacques Niot builds Fonderie Miniature's 1/48 scale kit of Grumman's 'Flying Coke Bottle'

This kit released by Fonderie Miniature came as a complete surprise to me, but study of the contents showed it to be a very good one indeed. It consists of two main sprues and two smaller ones of nicely engraved parts moulded in a light buff plastic, with two resealable bags for resin and white metal, a photo-etched fret, and a comprehensive decal sheet for three aircraft. Two very clear vacuform canopies are also supplied. French/English assembly, painting and decal placement instructions come on

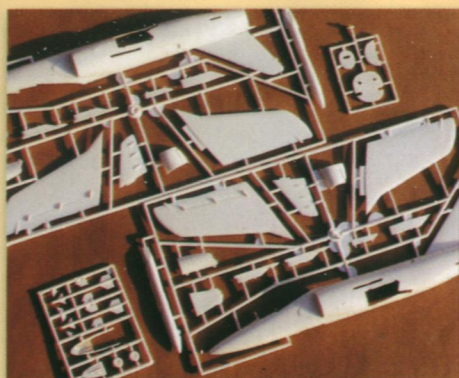
four double-sided A4 pages.

The build starts as usual with the cockpit, made up from a mix of resin, plastic, white metal and photo-etched parts, the latter providing the pilot's harness, instrument panel, side consoles and ejection seat handles. Surprisingly, no throttle quadrant is supplied even though a blank is cut out in the top of the etched port-side console for it. Likewise, I was been surprised to see that the inner sides of fuselage were devoid of any detail, until I discovered two photoetched plates which play their part here but

are not mentioned in the instructions. Even so, once in place I found these areas a little flat and added some detail from plastic and wire.

The instrument panel is a photo-etched part with holes of various diameters corresponding to the dial faces. To simulate these I cut a piece of very thin (0.13 mm) plasticard to the shape of the brass panel, pinpointed the centre of each dial with a 0.2 mm Rotring pen, carefully applied dial decals cut from a ReHeat sheet, and when dry, covered it with clear gloss Sellotape for the glazing.





Main components come on four sprues of light buff plastic



Resin detail items and a pair of very clear vacform canopies are supplied



White metal items

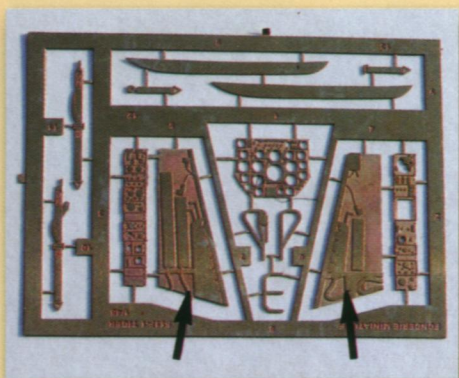
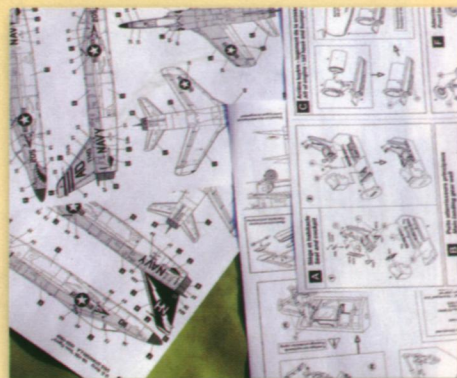


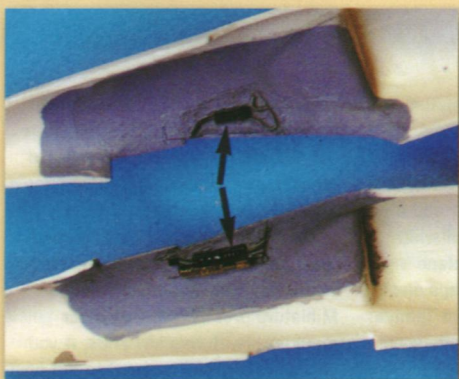
Photo-etched sheet provides cockpit detail and wing fences. Arrowed are cockpit sidewall details, not mentioned in the kit's instructions



Comprehensive decal sheet offers three options, all colourful, and including all six aircraft from the Blue Angels flight demonstration team for 1961



Bilingual French/English instructions come on four double-sided A4 pages



Jacques found the etched cockpit sidewalls 'a little flat' and enhanced them with plastic and wire



Completed cockpit assembly, mainwheel bay and exhaust nozzle/arrestor hook housing ready for installation



Completed cockpit installed in starboard fuselage half. Note generous amount of lead crammed into the nose to prevent 'tail-sitting', but Jacques still doubts if it was necessary

The etched panel, previously painted dark grey, was then cemented on the top and the whole assembly glued into the resin coaming recess.

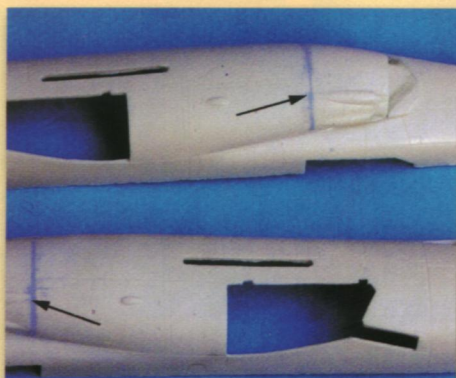
The next step was to deal with the mainwheel wells. These consist of two resin housings cemented to two plastic bulkheads. I found that some sanding was necessary to ensure a tight joint when it came to mating the fuselage halves. The two-piece resin exhaust nozzle and its support, which also acts as arrestor hook and tail bumper housing, fitted into the aft fuselage cut-out very precisely and needed no further adjustment. The nosewheel well was an equally good fit. After opening the four gun troughs and

adding some lead in the nose (I'm still questioning its necessity), the fuselage halves were joined, followed by the air intakes with their boundary layer plates. While some filler was necessary here, the joints were generally good and totally disappeared after careful sanding.

Wings consist of two upper and two lower surfaces of the simplest shape possible. The trailing-edges are ultra-thin — probably the thinnest I've ever seen — and need utmost care when cutting them off their injection gates. Wing fences are supplied as etched parts but no engraved locating line appears on the wings. I scored a 25 mm groove from the wing root,



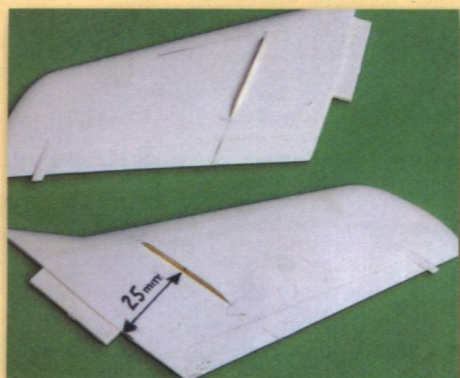
Fuselage halves ready for joining



Air intakes and their boundary layer splitter plates installed, and a small amount of filler used to make good the joint line



Main airframe assembly almost complete



Etched brass wing fences are supplied but no location is marked on the wings, so Jacques scored groove to aid accurate positioning



Uppersurface Light Gull Gray paint applied. Jacques used his own mix of Tamiya flat white, black and medium grey



Landing gear, arrestor hook and Sidewinder AAMs installed

starting 12 mm aft of the leading-edge and ending on the spoiler hinge line.

The kit also provides four underwing pylons, two for wing tanks with their 'Coke bottle' shape and two for Sidewinder missiles. The locating holes in the wing undersurfaces are purposely barely visible in case you elect not to use any ordnance load on your model, in which case no filler is necessary. The wing/fuselage joint is

near perfect with again almost no filler necessary. The tailplanes are an even simpler affair as they are one-piece units and their mounting to fuselage is trouble free — just make sure that the four 'tear drop' hinge fairings are on the top sides.

With the main airframe now complete the undercarriage units (main legs, torque links, retraction arms, doors and wheels) were

assembled ready for later installation and I began the painting process. I airbrushed all Corogard leading-edges, the aft part of fuselage and mainwheel wells with Alclad aluminium, and after masking them off, sprayed all white areas — undersurfaces, tailplane upper and lower surfaces, flaps and spoilers — using the excellent Tamiya white fine surface primer for its good density and fast-drying properties. The

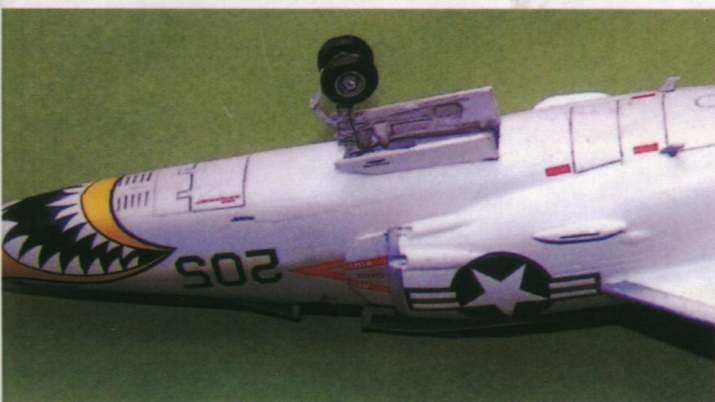
white metal undercarriage parts were also sprayed white at this time, with the oleo sections of the legs masked off to preserve their bright chrome appearance.

Following that good habit of many manufacturers when supplying clear vacformed canopies, Fonderie Miniature provide two very clear mouldings with this kit. Thus, if you choose to display the hood in the open position, as I did, you can cut the windshield away comfortably in the knowledge that a spare is at hand in case of accident! Some sort of aft coaming has to be installed under the rear of the hood with a white metal 'frame' or 'grid' at the front, the purpose of which is unknown to me (maybe an antenna?).

Prior to painting the uppersurfaces I attached the catapult hooks, arrestor hook, tail bumper and fuel dump pipe. A pitot tube whose length and placement are given on the instructions is supplied as a white metal part but is best replaced with a syringe needle and thin wire. All undercarriage components were glued in place, along with the windshield, which required a smear of filler to fair it in with the fuselage top. The sliding hood would be painted and fitted later.

After masking off all white and silver areas, windshield and cockpit aperture, I airbrushed the





uppersurface Light Gull Gray (FS 16440), for which I used a home-made mix of Tamiya flat white (XF-2) black (XF-1) and medium grey (XF-20) which gave a nice even, smooth surface. Once all masking tape had been removed I touched up the demarcation line of the two colours using a 0.2 mm nozzle and low airbrush pressure so as to obtain a light feathering.

The kit's decal sheet measures 24 cm x 16 cm and features two Tigers in the period Light Gull Gray/white scheme for VF-21 *Mach Busters* and VA-156 *Iron Tigers*, and one for any of the six aircraft in the *Blue Angels* flight demonstration team from 1961, effectively enabling one of eight aircraft to be modelled. This sheet is absolutely superb, with all necessary markings including service stencils,

and features accurate colours and perfect register and opacity. The latter extends to the yellow trim, which is traditionally translucent on many other brands of decal, and should here even stand out against the dark blue colour of the *Blue Angels* aircraft. The carrier film is ultra-thin but strong, and exhibited no silvering even on matt surfaces. On my Tiger I didn't apply any sort of gloss finish or use setting solutions and I was very happy with the result. If I had to raise a slight criticism I'd say that the blue on the national insignia is marginally too light, but it was no problem finding replacement items in my spares box. Even so, I don't hesitate to award this sheet a well-deserved 10 out of 10. Finally, the model was airbrushed with a 70:30 mix of Testors Gloss and Dull Cotes.

With this and the rapidly increasing flow of models released by FM, the margin between the mainstream production and so-called 'limited-run' products is getting thinner and thinner. This model highlights that in accuracy of overall shape and detail, ease of construction, choice of markings and for focussing on an important type that has rarely featured in this scale before, and never to this quality.

Thanks and congratulations to Fonderie Miniature for an excellent job!

SAMI





Regular SAMI contributor Paul Janicki's 1/72 scale model sailplanes are well to the fore here, most having featured in our Kit Reviews pages

Southdowns 2

The Southdowns Model Group Model Show 2 was held recently at Lancing, Sussex, and attracted more visitors, though competition entries were slightly down, reports Paul Janicki, who took the accompanying photos.

SAMI



One of many 1/72 scale Dakotas on the DC-3 Special Interest Group display, this one is in the early 1960s period colours of British Westpoint Airlines



Cartoon characters Snowy's and Tintin's DHC Chipmunk (apparently having had a 'Masefield Tourer' makeover), modelled in 1/72 scale by Bob Wolfenden



Few readers will need telling that Peter Bagshaw's 1/72 class winner is the 1918 Petroczy-Karman-Zurovec PKZ 2 observation helicopter. And yes, the real machine did fly — tethered — but was destroyed in a crash



Bill Perrin took second place in 1/32 scale class with his Finnish Messerschmitt Bf 109G



Classic Airframes 1/48 Fairey Battle Trainer, by Group member Bill Perrin



Dave Allen modelled this 1/144 DC-6B in Swissair colours



Bill Perrin built this Henschel Hs 129B from the Hasegawa 1/48 scale kit, with EagleCal decals

Mitsubishi A6M5 Zero

BOOK OF THE MONTH

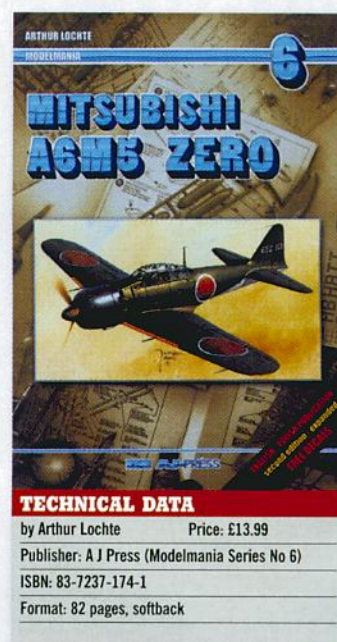
Written in dual Polish/English, this title contains 1/48 scale line drawings, black-and-white historical photographs, and colour photographs of restored aircraft which cover every area including the outer skin, internals, cockpit, weaponry, undercarriage, markings, stencil placement and engine detail. Alongside are line drawings of hidden details. For the modeller there is a stage-by-stage build of a Tamiya A6M5 Zero Type 52 in 1/32 scale, and a reference chart listing the Zero models available, plus decals, resin accessories and photo-etched detailing products, all listed by manufacturer and scale. Last, but by no means least, there is a free decal sheet which alone is worth the book's cover price.

Do you have a Tamiya or Hasegawa kit? Do you have all those additional detailing parts to do justice to a Kamikaze Zero — bombs, bomb racks, underwing ordnance, figures — but have been at a loss to create your dream because there has been a lack of

decals out there to reproduce any of the aircraft that were used as Kamikazes? Well, all your Christmases have come at once. After a seemingly endless wait since Tamiya brought out their sublime 1/32 A6M5 Zero Type 52, the modelling world has been waiting to produce a *Shikishima Tai* Zero (well, I have), and now you can. Here are decals to cover about 10 Zeros in the three most popular scales, along with profile colour plates of each aircraft.

I will try and remain impartial, but it will be very hard, as this is the sixth in a procession of books produced by AJ Press that are fantastic in both scope and content. The first 10 pages are of historical photographs, and a history of the aircraft, followed by 16 pages of scale drawings of the Type 52 in 1/72 and 1/48 scales. This is followed by 39 pages of colour photographs of restored examples, and finally 10 pages in colour showing the build of the Tamiya 1/32 scale kit. Interspersed within the pages are 12 colour plates of the aircraft included on the decal sheet.

Like all the others in AJ Press's series, this book is very highly recommended. I know the next model I will be making



now that decals are available to do it justice. IPMS Japanese Aviation SIG, watch this space!

Phillip Ware

SAMI

Wings of the Black Cross Numbers 1, 2 and 3

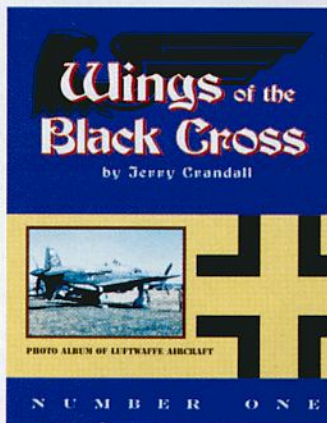
TECHNICAL DATA

by Jerry Crandall Price: \$17.95
Publisher: Eagle Editions
ISBNs: Vol 1 0-9721060-3-0, Vol 2 0-9721060-9-X,
Vol 3 0-9761034-9-4

To any modeller interested in the Luftwaffe during WWII, Eagle Editions are well known for their EagleCal range of decals, which are always superbly researched and quite often feature new information on familiar colour schemes. For the last three years Eagle Editions have annually been releasing the *Wings of the Black Cross* range of books that contain photographs used during research for their decal range, plus many other interesting subjects that to date have not made it on to a decal sheet. Many of these photographs are from private collections and have never been seen in print before. Most show wrecked aircraft and many of these would make a great model dioramas. The quality of the photographs varies from superb to a bit muddy — not surprising as many of them were taken by servicemen rather than professional photographers.

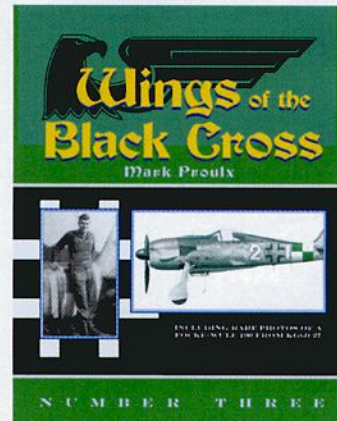
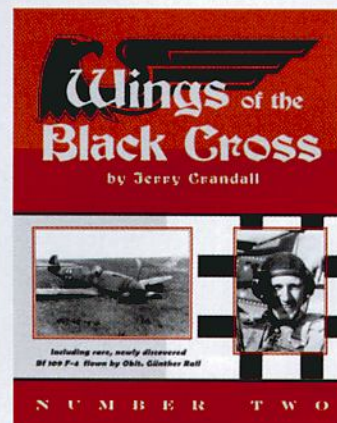
By use of computer enhancement and grey scale comparison the series editor has taken some educated guesses at the colours applied to the airframes, and at the rear of each volume are four pages of colour profiles.

Aircraft featured are as follows, in the order in which they appear: *Volume 1*: Fw 190A-2, A-7, F-9, A-8, A-6, F-8, A-3, S, Bf 109G-6, G-14, G-2, K-4, G-14, Do 335A-1, Bf 110G-2, G-4, Ju 87G-2, Ju 188A, Ta 154, Ar 96,



Me 262, Mistel. *Volume 2*: Bf 109F-4, E-4, G-6, G-14AS, G-10, K-4, Fw 190A-9, A-4, A-6, A-9, F-8, A-8, Me-262, Hs 162, Me 163, Do 335A-1, A-12, Bf 110G-4, Ju 87G-2, Ar 234B-2, Ju 88, Ju 388, Ju 188, Ju 290. *Volume 3*: Bf 109F-2, G-6, Fw 190A-9, F-8, F-9, A-3, A-6, A-8, Me 262A-1/U4, A-1, Bf 110E-2, G-4, G-2, Ju 87D-2, D-5, G-2, Ju 88G-6, Ar 96, Bv 138, He 177, Ju 188, Fw 200C-4, He 219A-2, He 111, Do 18. There are also many scrapyard photographs with multiple types on display.

The books' contents do not seem to have any order as the photographs jump around from year to year and variant to variant, but this is really my only criticism, as the information they contain is superb and well illustrates the wide range of attractive markings that make WWII-era German aircraft so fascinating for modellers.



Our thanks to Eagle Editions for supplying the review samples. These books can be ordered direct from their website www.eagle-editions.com

DF

SAMI

Pfalz Scout Aces of World War I

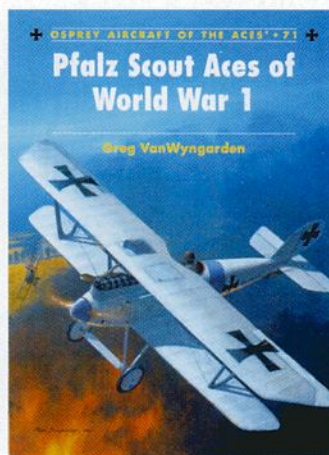
TECHNICAL DATA

by Greg VanWyngarden Price: £12.99
 Publisher: Osprey Publishing
 ISBN: 1-84176-998-3
 Format: 248 mm x 184 mm, 96 pages, softback
 Illustrations: Black-and-white photographs and colour profiles

This volume from the Osprey 'Aircraft of the Aces' series is really a history of Pfalz fighters and their operational service in WWI. As the author himself admits, it is not possible to be sure which aircraft type was flown when kills were made, so this should more correctly be titled *Aces That Flew Pfalz Scouts At Some Stage*. Having said that, it in no way detracts from what is an excellent book and it

reflects the fact that most of the Pfalz fighters were viewed as 'poor seconds' to other types.

The format of this volume follows others in this series, with a chronological narrative covering the development of Pfalz fighters and their frontline service. The main Pfalz fighters are covered: the 'E' series monoplanes, the D.III/IIIa and the lesser-known D.VIII and D.XII. The text mainly focuses on descriptions of operations and the pilots that flew them, enhanced with many first hand accounts that give a real insight into the reality and strains of air combat in WWI. Many of the accounts were new to me and revealed fresh material which showed that opinions about the Pfalz fighters were mixed, with some



pilots actually favouring them (although most couldn't wait to see

the back of them).

The book is illustrated throughout with a wide selection of period photos of pilots and their machines, many of which would make great dioramas. There are also 32 excellent colour profiles along with four pages of more detailed colour views. The only slight disappointment is the lack of scale drawings of the D.VIII and D.XII (the D.III and IIIa are included) but this slight niggle aside, this is an excellent volume that is a welcome addition to any WWI library, even if (like me) you already have material on Pfalz aircraft.

Nigel Rayner

SAMI

Beriev's Jet Flying Boats

TECHNICAL DATA

by Yefim Gordon, Andrey Sal'nikov and Aleksandr Zablotskiy
 Price: £19.99
 Publisher: Midland/Ian Allan Publishing
 ISBN: 1-85780-236-5
 Format: 128 pages, softback



This is the 28th title in Midland's revealing Red Star series. Prior to 1990 the information contained in these remarkable publications would have been classed as top secret by the Soviet regime, and thus these books have become invaluable to all with an interest in Russian aircraft.

Beriev Design Bureau has been synonymous with flying boats and amphibians for over 60 years, and the jets covered here are fascinating in their design, size and especially for their oddity, albeit that for the modeller few are available in kit form.

Although interest is therefore limited in modelling terms, it makes a

fascinating read for those interested Soviet/Russian aircraft. Content is split roughly 60:40 between military and modern civil Beriev types that are used as commercial transports, flying ambulances and waterbombers.

Phillip Ware

SAMI

Japanese WWII Aircraft in Colour

TECHNICAL DATA

by Martin Ferkil
 Publisher: Revi
 ISBN: 80-85957-12-4
 Price: £13.99
 Cover: Softback
 Format: 280 mm x 215 mm 90 pages



It does exactly what it says on the cover! Starting with a few pages of nicely presented photographs of post-war wrecks, the book then launches into 60+ pages of very fine colour profiles. These are presented two-to-a-page in landscape format, so you will have to rotate the book to enjoy them, but better this than the annoyance of an oddly-shaped book sticking out of your carefully arranged bookshelves. Each profile is captioned in detail.

Pages 68-81 constitute an in-depth monograph of the Ki-115, which is a bonus in itself, as it's not the kind of aircraft on which this level of data is readily available. Icing on the cake is a

decal sheet featuring two Dinahs, a Nick, a Tony and a Frank.

A book by modellers for modellers. If only they all were!

Barry Brine

SAMI

WEEAC Navigator range Part 5 – Trumpeter Me 262A-1a

TECHNICAL DATA

Price £3.95 plus £1.50 post and packing

At last WEEAC have moved into the larger scale with their instructional range of CD-ROMs. For their first large-scale model they have picked one of my favourite kits of recent years — Trumpeter's Me 262. This reasonably priced kit is perfect a choice as it supplies loads of detail that WEEAC can use to illustrate their modelling techniques. As with the previous discs the contents are divided into three distinct chapters which appear as a menu once you insert the disc into your computer's CD drive:

1. 'The Construction' is divided into

the following seven chapters: Looking Back: a brief history of the Me 262; In the Box: a description of the Trumpeter kit; Building the model: the main text covering the construction process; Colouring In: Paint pots on standby; Marking Up: Applying the decals; Finishing Off; and The Conclusion. All of the stages are well illustrated with clickable links at various stages of the construction process.

2. The Gallery contains 53

photographs of the finished model.

3. The Directions section has always been my favourite part of the

Navigator range and with this release WEEAC repeat all of the previous hints and tips and a few new ones. Some of the subjects covered include dry-brushing, working with etched-brass, weathering, dealing with clear parts, pastel weathering and metallic finishes.

The good news is that this disc is even better value than the previous

releases due to the enlarged 'hints and tips' section, but the bad news is that there has been a small price increase to £3.95. At present you can only obtain these discs from WEEAC at 13 Island Farm Close, Bridgend, Mid Glamorgan CF31 3LY, email: weeac@s129152049 web: www.weeac.co.uk

Future releases will be in 1/48 scale and will include the Hasegawa/Revell Phantom FGR.2, Hasegawa Messerschmitt Bf 109G and F-14 Tomcat, and the Airfix English Electric Lightning F.6. Our thanks to WEEAC for providing the review sample.

DF

SAMI



Mikoyan MiG-29

TECHNICAL DATA

by Yefim Gordon Price: £35
 Publisher: Ian Allan (Midland)
 ISBN: 1-85780-231-4
 Format: 280 mm x 215 mm, 512 pages, hardback

The sheer opulence of this volume has still not sunk in, and it is with a nagging sense of guilt that a little voice at the back of my mind whines with ingratitude, 'it is such a lovely piece of work — but why couldn't it have been on the Tornado?'

This is churlish. When a fellow is sent a book of this quality to review he should set aside matters of personal preference and get on with lauding it to the skies. It



is quite simply the most beautiful book he has ever seen on the Fulcrum, and is so comprehensive in its coverage of every aspect of the aircraft's career — right up to the present day — that he has set himself the urgent task of finding kits and decals to construct as many examples of that aircraft as his meagre modelling time



will allow. This book is quite simply inspirational.

As you can imagine, with 512 pages there is nothing left out, and close attention is paid to matters dear to the modelling heart such as colours and markings, as well as the technical and historical accounts which the 'serious' aviation enthusiast may prefer.

Pish! and tush! to them. Modellers will rejoice in the 98 colour profiles, and devote many happy hours to planning impossible line-ups of models that time will never allow, based on the 1,000 + illustrations this book offers up for what seems a very reasonable price.

Marcus Brown

SAMI

Jaguar A/E

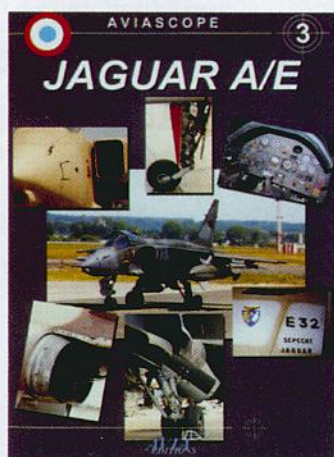
TECHNICAL DATA

by Thierry Metz Price: £14.50
 Publisher: Avia Editions (Aviascope)
 ISBN: 2-915030-13-8
 Format: 40 pages, softback

This softback contains a profusion of colour reference photographs of the French Jaguar variants with a centre spread of detailed line drawings of aircraft parts and two pages of stencil marking photographs, there is an extremely brief descriptive text in French and English, and the high quality production values are emphasised by the use of high quality photographic paper.

If the reader has an Italeri, MPC, Heller kit awaiting attention in the collection then this will be a great source of reference. It is a feast of photographs in a montage form, covering every aspect of the aircraft both inside and out including the engine, cockpit, internals, 'panels off', undercarriage and weaponry.

Although it appears a tad expensive for what is on offer, this publication would be highly recommended to anyone interested in modelling the Jaguar as there is very little in the way of reading. Just the



provision of location text to accompany the relevant colour photograph. With the type now out of RAF service this is fast on its way to becoming an historical document, and although the featured aircraft are French, this does not detract from its content for the UK modeller.

Highly recommended to all those with a kit for and/or an interest in the SEPECAT Jaguar.

Phillip Ware

SAMI

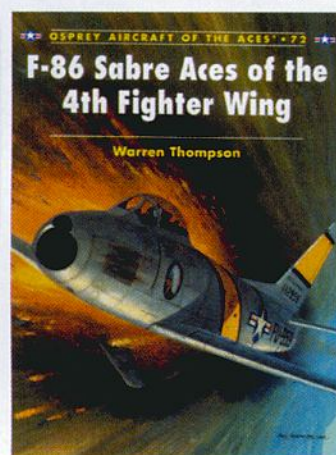
F-86 Sabre Aces of the 4th Fighter Wing

TECHNICAL DATA

by Warren Thompson Price: £12.99
 Publisher: Osprey Publishing
 ISBN: 1-84176-996-7
 Format: 248 mm x 184 mm, 96 pages, softback
 Illustrations: Colour and black-and-white photographs, colour profiles and line drawings

As in Osprey's previous book on aces of the 51st Fighter Wing by the same author (SAMI, August 2006), this title uses a mix of interviews and historical text to chart the 4th Fighter Wing's operations in Korea where they were tasked to deal with threat poised by the then recently-introduced MiG-15.

Illustrations are a mix of period photographs in black-and-white and colour, colour profiles and a three-page montage of nose art. An Appendix



provides a timeline of the 4th FW's service in Korea, a list of all 28 aces assigned to the unit and a set of side-view plans for six Sabre variants.

If you are interested in the Korean War or the Sabre this will be a valuable addition to your book collection and is very good value for money.

Our thanks to Osprey for supplying the review sample.

DF

SAMI

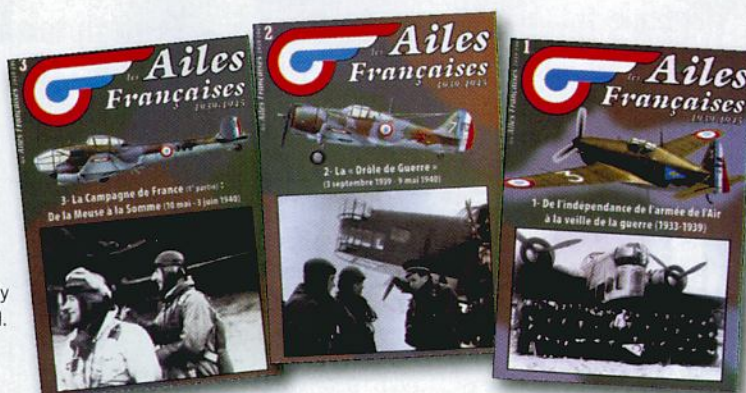
Les Ailes Francaises 1933-1945

TECHNICAL DATA

Vol 1: De l'Indépendance de l'Armée de l'Air à la Veille de Guerre 1933-1939
 Vol 2: La Drôle de Guerre 3 Septembre 1939-9 Mai 1940
 Vol 3: La Campagne de France de la Meuse à la Somme 10 Mai-3 Juin 1940
 Price: £12.99 each
 Publisher: Air Magazine Export Express
 Format: Approx 100 pages each, softback

This is a review of the first three in what appears to be an ongoing series of magazines covering the aircraft used by France from 1933 to the end of WWII. All printed on high quality photographic paper, and feature line drawings, black-and-white photographs and, most

importantly, a profusion of colour plates of a multiplicity of designs from Farmans, Dewoitine, Blériot, Potez, Breguet, Amiot, Loire, Morane-Saulnier, Caudron-Renault, Curtiss, Les Mureaux, Bloch, Glenn Martin, Vought and Leo, to name but a few. Also covered (but to a lesser extent) are German aircraft employed in the invasion of France, mostly early marks of Messerschmitt and Heinkel. I hasten to add, that sadly, I have only schoolboy French but this did not detract from the enjoyment of these publications (a picture paints a thousand words and all that, and these are worth the cover price alone). For those with basic French these magazines will be enjoyed to their full, and even for those with little or no language knowledge they will be



appreciated for the historical photographs of little-known types.

All aircraft covered in the colour plates are also featured in either 1/144 or 1/72 scale three-view plans. Those interested in French aircraft who have Tamiya, Heller,

Azur or Fonderie Miniature kits of any of these types would benefit greatly from these publications for reference. I recommend them wholeheartedly.

Phillip Ware

SAMI

Modellers Datafile 10

The Messerschmitt Bf 109



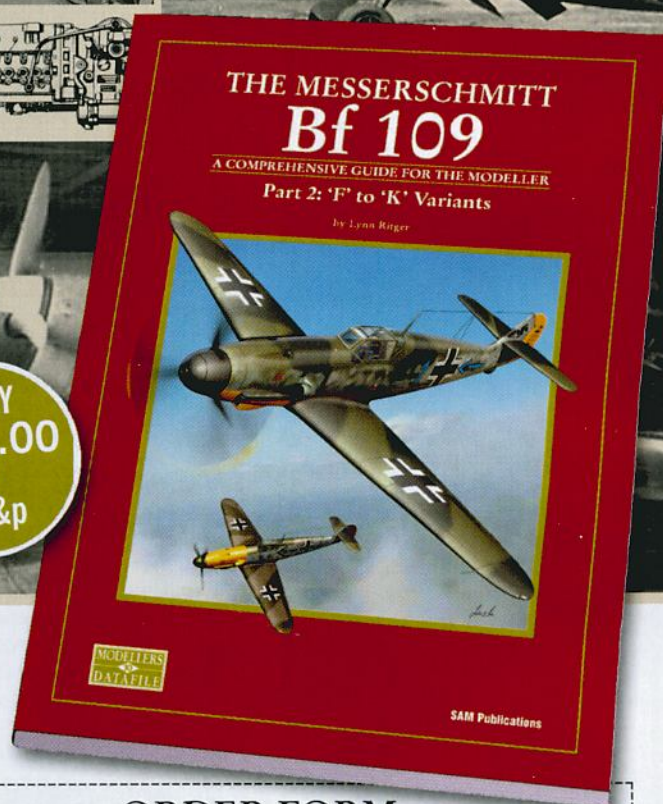
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Letter of the Month Competition

Revell UK are offering a monthly prize for Readers' Letter of the Month.



Congratulations to this month's winner of the Revell 'Letter of the Month Competition'. Mr Hengst receives a selection of paints from the new Revell Aqua Color range.

Send Your Letters To...

Please send your comments, questions and feedback to the editorial address, clearly marked 'Feedback'.

Readers' Feedback

The views expressed in this column are not necessarily those of SAM Publications. Reader's address details must be supplied but we will only publish them if the letter is considered to be a request for assistance or further correspondence from the readership.

This page will be used to publish letters we receive from the readership that relate to articles previously published in this magazine. These letters will add to, update or revise such articles.



Bernie modified Hasegawa's B-47 Stratojet as the unique Canadair CL-52 which was used to test the huge Orenda Iroquois engine (in pod on aft starboard fuselage) destined for the Avro Canada CF-105 Arrow. Such was the power of the Iroquois that it could keep the B-47 aloft with all six of its General Electric J47s shut down!



Matchbox's Supermarine Stranraer by Bernie Hengst in unfamiliar civilian colours as Queen Charlotte Airlines' Canadian-built 'Alaska Queen'. Wright engines and cowlings came from a Lockheed Hudson kit

Back to Basics: a family heirloom?

LETTER OF THE MONTH

Thank you very much for the excellent *Back to Basics Aircraft Guide* inserts, which I am collecting these guides for my grandson Daniel, 10 years old, who builds aircraft models with me from time to time.

I have been building aircraft models since 1960 when I bought my first Airfix kits at Woolworth's in Leeds. We have come a long way since then in quality and prices. Now retired, I still have fun building and researching models and am a member of the Toronto IPMS and Aero Buff clubs. I include a few pictures from my model room, workbench, showcase and models.

In your March 2006 issue I noticed in



Bernie Hengst's orderly workroom puts the Managing Editor's shambolic office-cum-model room to shame

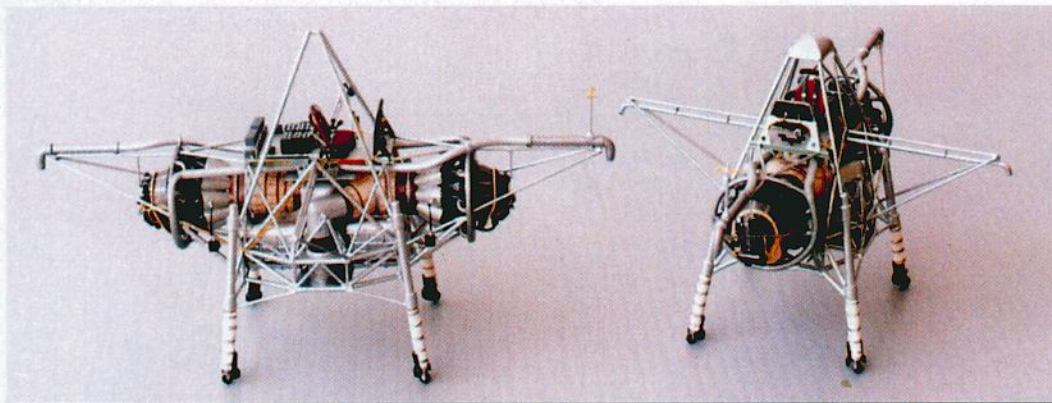
models with a good gloss finish, but still have silvering occurring at times, especially with small decals. I found that if I dip an 'O' or 'OO' brush into a fast-drying solvent cement, stroke the brush two or three times at the rim of the bottle and then carefully touch the silvered part of the decal with the tip of the brush, the film melts and adheres to the paint underneath the decal. Please note: there should be only the smallest amount of solvent in the brush; in other words the brush should be nearly dry. I prefer to touch the decal two or three times on the spots I'm fixing. It is also important never to move the brush, as it will smudge the inks used in printing the decals. Touch only the clear parts of the decals, not the printed parts.

Bernie Hengst
Little Britain, Ontario, Canada

the Bluenose 'Lawndart' feature by David Francis the silvering under the decals. I know that these builds are done under timeline pressures, but may I offer a tip to alleviate this problem? Before decalling I always spray my

Twin Bedsteads

Regarding the Rolls-Royce Thrust Measuring Rig ('News Update' March 2006 and 'Feedback' July 2006), I scratchbuilt two in 1/72 scale, as there were slight differences between the first and second vehicles. Three years elapsed between the time I photographed the 'combination' Bedstead at the Strathallan museum (parts were used from both damaged machines to reconstruct the preserved example) to completion of both models, and I had changed countries twice. About 100 close-up photographs were taken and as many measurements as was thought necessary, and with some excellent photos and drawings of RR Nenes, some reasonable three-view drawings were knocked up in a few weeks. I have to admit it was a labour of love building them, and back then there were no resin engines to be had, so 36 combustion chambers were made along with 36 elbows from the compressors



How's this for hard labour? Dave Howes scratchbuilt two Rolls-Royce 'Flying Bedsteads' in 1/72 scale over a three-year period

(one of the trickier jobs). The biggest headache came from the compressed air collector rings and the large fore-and-aft distributor pipes.

At around four-and-three-quarter inches by three-and-three-eighth inches

overall, there was a lot of work in a very small space, but after seeing a wonderful model (about 1/48 scale) when I worked at RAE Bedford (Thurleigh) back in 1964, the Flying Bedstead was always at the top of my

'most wanted' list.

The photo shows both models together, and the other shot is based on photographs from *Flight* and *The Aeroplane*, although to be completely accurate for period the second Fairey F.D.2, WG777, should be in silver and not the later dark blue scheme.

So, if you have a spare three years, may I suggest scratchbuilding a 'Flying Bedstead'? I'm sure it will be quicker than waiting for a kit. I could fill up a couple of foolscap sheets with experimental aircraft that have yet to be produced in kit form, those that actually flew, not just paper projects, so Anigrand and A+V have a long way to go before they reach saturation point. My own personal 'Holy Grails' are the Short S.A.4 Sperrin, Avro Ashton and Martin XB-48, in that order. Dream on!

Dave Howes
Amphoe Meang, Thailand



One of Dave Howes' 'Flying Bedsteads' with two other British experimental aircraft of the period, Boulton-Paul P.111A (far left) and the second Fairey Delta 2, WG777

Still Lusty after all these years

Top marks for your August issue article on the Handley Page Victor – one of my all-time favourites.

I have a keen interest in post-WWII RAF jet aircraft and, like many others, am a great fan of our sadly now extinct V-bomber force. I can well remember the airshows at RAF Waddington in the late 1970s when the flying display was opened with a four-ship scramble of Vulcans. The sight and sound of four of those mighty beasts taking off in swift succession is a memory that I shall keep forever. As Bill Clark says, let's hope that XH558 will finally make it back into the air.

I see that one of the Victors Jerry Boucher depicted in his artwork is K.2 XL231, otherwise known as *Lusty Lindy*. This aircraft was one of the lucky ones to have survived, and is on display at the Yorkshire Air Museum at Elvington, where it is kept in full (non-flying) running order, performing high-speed taxi runs at the museum's annual airshow.

John W Roberts
Hull, East Yorkshire



'Lusty Lindy' lusts on at the Yorkshire Air Museum

WARRIORS

New Releases

Spitfire Mk. Vb



Spitfire Mk.VB (Madras) Squadron, Deanland, Early June 1944. The Mark V Spitfire was essentially a Mk. I or II fuselage strengthened to accommodate a Merlin 45 engine. The "Vb" designation referred to a fighter with four .303 machine guns and two 20mm cannons. Scale 1:72. P/N DR50253

Me109G-6



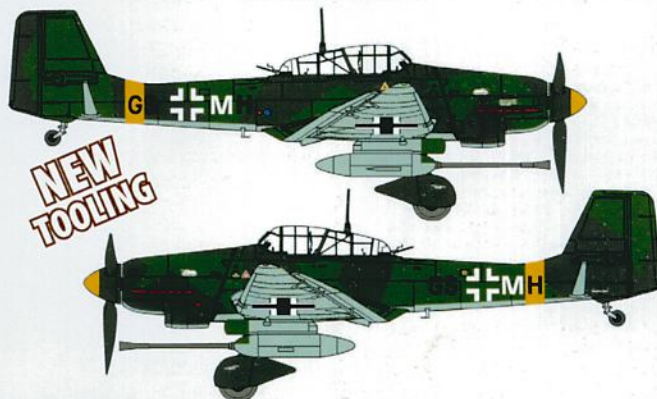
Me109G-6 "Black 1" 2./JG27, Austria 1944. The model replicates "Black 1", the Me109-G6 flown by Oberleutnant Josef Jansen, who claimed seven enemy aircraft kills before dying of wounds on 28/5/1944. Scale 1:72. P/N DR50255

Grumman F4F-4 Wildcat



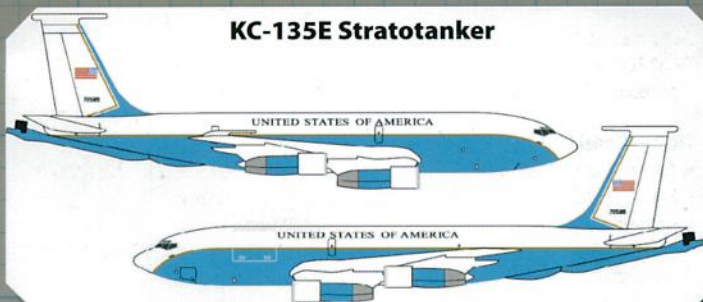
F4F-4 Wildcat "Black 9-F-1", VF-9 "Cat o' Nines", Operation Torch 1942, USS Ranger. This aircraft is impeccably decked out in the markings of VF-9, a squadron formed on 1 March 1942 and often known as "Cat o' Nines". Scale 1:72. P/N DR50206

Junkers Ju 87G



Junkers JU-87-G 10.(Pz)/SG 1 This 1/72 scale tank-busting Stuka "Panzerknacker" (tank cracker) is a brand new offering produced from completely new moulds. Scale 1:72. P/N DR50258

KC-135E Stratotanker



US Air Force KC-135E Stratotanker. The model is beautifully produced with an impeccable finish in a typical blue colour scheme, with appropriate "United States of America" markings. Scale 1:400. P/N DR55924

F-16B Fighting Falcon



NSAWC F-16B Fighting Falcon. The Naval Strike and Air Warfare Center (NSAWC) at NAS Fallon (near Reno in Nevada) fields a fleet of fourteen F-16A/B Block 15 fighters. Scale 1:72. P/N DR50252



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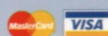
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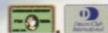


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